4. Revision of the West-Indian Micro-Lepidoptera, with Descriptions of new Species. By the Rt. Hon. Lord Walsingham, M.A., LL.D., F.R.S.

#### [Received November 5, 1896.]

About two years ago I received a communication from Baron W. von Hedemann asking me to examine and determine a collection of Micro-Lepidoptera which he had made in the Danish West Indies. Although at first very unwilling to undertake the task, anticipating, not without reason, that there would be a large amount of new material, and that it would involve a very difficult study of the synonymy of described species and of general classification, I felt that such a study must necessarily be very instructive, and that the opportunity should not be lost to enlarge my limited acquaintance with the West-Indian fauna. Moreover, as the Danish Islands lie to the north of those which supplied the material for my previous paper [Proc. Zool. Soc. Lond. 1891, pp. 492-549 (1892), they promised to afford some connecting links with the rich fauna of North America, already somewhat known to me. As to the instruction to be derived, and as to the difficulty of the work undertaken, my calculations were not at fault; moreover, the rediscovery of Clemens's genus Cycloplasis, with some other decidedly North-American forms, has been of special interest in connexion with the subject of distribution. The amount of material to be dealt with was largely increased by the reception of a further collection from the same islands made by Mr. F. Gudmann. These, together with the Micros collected by Mr. H. H. Smith in Grenada (from the Godman and Salvin collection), and others received from Dr. Rendall, Mr. T. D. A. Cockerell, Mr. W. Schaus, Mr. F. W. Urich, and the late Monsieur E. Ragonot, form the materials of this paper. It is in fact a second edition of the former one, bringing the West-Indian catalogue of Micro-Lepidoptera up to date, on the lines of the new system of classification put forward by Mr. E. Mevrick in his 'Handbook of British Lepidoptera,' which marks an epoch in the study of these small and often obscure forms.

When the paper was commenced I was working upon the old lines, with such modifications only as had become obviously necessary as the general study of the subject has advanced; but the publication of Mr. Meyrick's book supplied a want, and his system seemed to be so near at least to that which I was already working up to by an independent course of study and reasoning, that no effort was required to induce me to accept in the main his sequence of the different families and genera; this has been adopted so far as possible, with the one notable exception of the position and value of the *Tortricidæ*, which cannot, in my opinion, be rightly separated from the *Tineina*, and should take a place

rather in the middle than at either end of the series of families which form this group.

The adoption of Mr. Meyrick's system, of course, involved great changes in generic nomenclature, for which he had given no reasons. In some cases where his alterations have been accepted, the reasons for such acceptance are here set forth; in all cases where I have been unable to accept his generic names I have fully discussed and explained how the names here adopted have been arrived at. For any further explanation on this point, the reader may now refer to the code of rules compiled by Mr. Durrant and myself, which has lately been published by Messrs. Longmans under the title 'Rules for regulating Nomenclature with a view to secure a strict application of the Law of Priority in Entomo-

logical Work.'

In my previous paper 132 species were enumerated as occurring in the West Indies: of these 10 were simply mentioned as "sp."; these are now deducted, as are also Scoptonoma tipuloides, Wism. (now regarded as belonging to the Pyralidina); Pterophorus aspilodactylus, Wkr. (now regarded as a worn specimen of P. agraphoductylus, Wkr.); Canogenes pusilla (Z.), Wlsm. (wrongly identified, and described in the following pages as Hypoclopus parvus, sp. n.); Psecadia adustella, Z. (= Tamurrha gelidella, Wkr.); Psecadia ingricella, Mschl. (= $Ethmia\ confusella$ , Wkr.); Cosmoptery.v lespedeze, Wlsm. (= Cosmopteryx attenuatella, Wkr.: Walker referred this species to Gelechia, which must be my excuse for the creation of the synonym); Cosmopteryx gemmiferella (Clem.?), Mschl. (recorded with doubt by Möschler, and here omitted as being probably synonymous with attenuatella, Wkr.). These deductions reduce my former list to 115 species (132-10-7). To this total is now added 34 species already described, and these, together with 153 new species, raise the total of the West-Indian Micro-Lepidoptera to 302 species (115+34+153). Nineteen genera are characterized as new.

The species recorded from each of the islands are as follows:— Cuba, 23; Jamaica, 31: Haiti (or San Domingo), 50; Portorico, 37; St. Croix, 57; St. Thomas, 114; St. Jan, 3; St. Martin, 1; Guadeloupe, 1; Dominica, 7; Martinique, 1; St. Lucia, 2; St. Vincent, 43; Grenada, 60; Trinidad, 8; Curação, 1.—West Indies, 302.

Of these species, 27 occur in the United States, 4 in Central America, and 28 in South America; 5 are found also in Europe, 3 in India and also in other parts of Asia, while one extends to Malaysia; 5 occur in Australia, and 4 in Africa. The larvæ of 49 species are known, of which number 34 have been bred in the West Indies.

What is now specially wanted is some knowledge of the Micros of the more northern islands stretching towards the coast of Florida, as well as from the peninsula of Florida itself. There is strong reason to believe that very beautiful and distinct forms of these insects are to be found in Cuba, Portorico, and Haiti, and also in Florida—such as have been already received include some

remarkably fine and distinct species; and I trust that the publication of this paper may induce collectors to supply material from these more northern localities, with which we are at present so

little acquainted.

The collections made by von Hedemann and Gudmann are for the most part in beautiful condition, the specimens well set and mounted, and a large proportion of them bred. Full data have been given by which the life-history of each bred species can be followed, and this information has added much to the value of the specimens; unfortunately, the note-books in which descriptions of the different larvæ had been written were lost.

I must express my indebtedness to my two Danish correspondents for their kindness in allowing me to keep a large number of duplicates, which will eventually find their way to the British Museum with the remainder of my collections; and Baron von Hedemann has also been kind enough to examine for me such types of Fabricius's West-Indian species as are extant in the Copenhagen Museum. I must also return my thanks to my other correspondents whose names are mentioned above, especially to Messrs. Godman and Salvin for placing much valuable material in my hands.

#### I. PYRALIDINA.

#### I. PTEROPHORIDÆ.

## 1. TRICHOPTILUS, WISIN.

## 1. Trichoptilus centetes, Meyr.

Trichoptilus centetes, Meyr. Tr. Ent. Soc. Lond. 1886, 16-17<sup>1</sup>: 1887, 266<sup>2</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 494-5, 542 (1892)<sup>3</sup>.

[? = Pterophorus oxydactylus, Wkr. Cat. Lp. Ins. B. M. XXX. 944 (1864). Aciptilia oxydactyla, Wksm. Pr. Z. Soc. Lond. 1885, 885 (1886). Pterophorus oxydactylus, Moore, Lp. Ceyl. III. 528-9, Pl. 209. 16 (1887); Swinh. & Cotes, Cat. Moths Ind. 669. No. 4549 (1889). Trichoptilus oxydactylus, Wksm. Pr. Z. Soc. Lond. 1896, 277 (1896).—Ceylon; India, IX., XII.; Arabia, II.—III., IX., XII.]

Hab. New Guinea, XI.<sup>1</sup> Queensland <sup>2</sup>. West Indies <sup>3</sup>—St. Croix, 22 IV.-18 V. (Gudmann, Hedemann, Pontoppidan); St. Thomas, 13 III.-25 III. (Gudmann, Hedemann); St. Vincent <sup>3</sup>.

Bred by Mr. Gudmann at St. Croix, but the food-plant has not been identified.

## 2. Sphenarches, Meyr.

## 2. Sphenarches caffer, Z.

= ANISODACTYLUS, Wkr. 10; n. syn. = DIFFUSALIS, Wkr.; = WALKERI, Wlsm. 10; = SYNOPHRYS, Meyr. 10

Pterophorus caffer, Z. Hndl. Kngl. Svensk. Vet.-Ak. 1852, 118 <sup>1</sup>. Oxyptilus caffer, Z. Lin. Ent. VI. 348-9 (1852) <sup>2</sup>; Wkr. Cat. Lp.

Ins. B. M. XXX. 934 (1864) <sup>3</sup>. Oxyptilus anisodactylus, Wkr. Cat. Lp. Ins. B. M. XXX. 934–5 (1864) <sup>4</sup>. Pterophorus diffusalis, Wkr. Cat. Lp. Ins. B. M. XXX. 945 (1864) <sup>5</sup>. Oxyptilus caffer, Wlsm. Tr. Ent. Soc. Lond. 1881, 279 <sup>6</sup>. Oxyptilus walkeri, Wlsm. Tr. Ent. Soc. Lond. 1881, 279–80 <sup>7</sup>. Sphenarches synophrys, Meyr. Tr. Ent. Soc. Lond. 1886, 17–8 <sup>8</sup>. Oxyptilus anisodactylus, Moore, Lp. Ceyl. III. 528 (1887) <sup>9</sup>. Sphenarches caffer, Meyr. Tr. Ent. Soc. Lond. 1887, 268 <sup>10</sup>. Oxyptilus anisodactylus, Swinh. & Cotes, Cat. Moths Ind. 668. No. 4542 (1889) <sup>11</sup>. Sphenarches caffer, Cotes, Ind. Mus. Notes, II. 20, figg. (1891) <sup>12</sup>; Wlsm. Ind. Mus. Notes, II. 20–1 (1891) <sup>13</sup>; Cotes, Ind. Mus. Notes, II. 163 (1893) <sup>14</sup>.

Larva. "Calabash" (Gambia) 13; in pods of Dolichos lablab

(India) 12-14.

Hab. S. Africa—Caffraria 1-3, 13, Natal, XI.—XII. 7, 13 E. Africa 13. W. Africa—Gambia 13. Asia—Japan 13, Ceylon 4, 9-11, 13, India 12-14, Burma 13. Australasia—New South Wales, II. 10, Queensland (Moreton Bay) 5, New Hebrides 8, Tonga Ids. 8 West Indies—St. Thomas, 20 III. (Gudmann); Grenada (Balthazar, 250 ft., windward side, 15-20 IV.—H. H. Smith).

Oxyptilus periscelidactylus, Fitch, from the United States, belongs to the genus Sphenarches, and is at least very closely allied

to caffer, Z.

#### 3. PLATYPTILIA, Hb.

#### 3. PLATYPTILIA PUSILLIDACTYLA, Wkr.

= TECNIDION, Z.

Oxyptilus pusillidactylus, Wkr. Cat. Lp. Ins. B. M. XXX. 933 (1864) <sup>1</sup>. Platyptilia tecnidion, Z. Hor. Soc. Ent. Ross. XIII. 468-9, Pl. VI. 162 (1877) <sup>2</sup>. Platyptilia pusillidactyla, Wlsm. Pr. Z. Soc. Lond. 1891, 495, 542 (1892) <sup>3</sup>. Amblyptilia pusillidactyla, Hdm. Stett. Ent. Ztg. LVII. 8 (1896) <sup>4</sup>.

Hab. West Indies—Jamaica 1, 3; St. Croix, 4 22 IV. (Gudmann); St. Thomas, II.<sup>2,3,4</sup>; Grenada (Balthazar, 250 ft., and La Force Estate, 350 ft., windward side, 5 IV.–5 V.—H. H. Smith).

## 4. PLATYPTILIA COSMODACTYLA, Hb.

## $(?=ACANTHODACTYLUS, Z.^7) = DIREPTALIS, Wkr.^7$

Alucita cosmodactyla, Hb. Samml. Eur. Schm. IX. Pl. VII. 35–36 (1816?) <sup>1</sup>. Amblyptilia cosmodactyla, Hb. Verz. bek. Schm. 430. No. 4183 (1826) <sup>2</sup>, &c. [? Pterophorus acanthodactylus, Z. Handl. Kongl. Svensk. Vet.-Ak. 1852, 117 <sup>3</sup>.] Oxyptilus direptalis, Wkr. Cat. Lp. Ins. B. M. XXX. 934 (1864) <sup>4</sup>. Amblyptilia cosmodactylu, Stgr. & Wk. Cat. 342, No. 3131 (1871) <sup>5</sup>. Ambliptilus cosmodactylus, Wlsm. Pter. Cal. & Or. 23–5, Pl. II. 2–4 (1880) <sup>6</sup>: Tr. Ent. Soc. Lond. 1881, 277–8 (1881) <sup>7</sup>. Platyptilia cosmodactyla, Meyr. Tr. Ent. Soc. Lond. 1890, 486 (1890) <sup>8</sup>.

Hab. Europe 1, 2, 5, 8 [larva, Aquilegia vulgaris, Geranium pratense, Salvia glutinosa]. S. Africa—Transvaal 3, Cape Colony 4, Natal,

VII.-VIII., XI. 7 UNITED STATES—California 6, Oregon 8 (b. IV. — e. VIII.; larva Orthocarpus sp., VI.) 6. West Indies—Jamaica (Cinchona, 5000 ft., IX., Fawcett).

I am indebted to Mr. Cockerell for the specimen collected by Mr. Fawcett. There is another specimen in the British Museum,

labelled "Jamaica (Cinchona), 90.65, 6.90, W. Fawcett."

#### 4. OCHYROTICA, Wlsm.

#### 5. OCHYROTICA FASCIATA, WISM.

Ochyrotica fasciata, Wlsm. Ent. Mo. Mag. XXVII. 218 (1891) 1: Nov. Lp. I. 75-6, Pl. XII. 2 (1892) 2.

Hab. Central America<sup>1,2</sup>. West Indies — Grenada (Balthazar, 250 ft., windward side, 20 IV.—H. H. Smith). Brazil<sup>1,2</sup>.

#### 5. STENOPTILIA, Hb.

= Mimæseoptilus, Wlgrn.

#### 6. STENOPTILIA (?) PUMILIO, Z.

= \* GILVIDORSIS, Hdm. partim. (nec Z.).

Mimeseoptilus pumilio, Z. Verh. z.-b. Ges. Wien, XXIII. 324 (1873)<sup>1</sup>. Stenoptilia? pumilio, Wlsm. Pr. Z. Soc. Lond. 1891, 495, 542 (1892)<sup>2</sup>. Mimæseoptilus gilvidorsis, Hdm. Stett. Ent. Ztg. LVII. 8-9 (1896)<sup>3</sup>.

Hab. UNITED STATES—Texas <sup>1</sup>. West Indies—Jamaica (Monteague, 1100 ft., XI., Rendall); St. Croix, <sup>3</sup> 28 IV. (Hedemann), V. <sup>3</sup>; St. Vincent <sup>2</sup>; Grenada (windward side—Balthazar, 250 ft., La Force Estate, 350 ft., 5 IV.-5 V.—H. H. Smith).

Heer Snellen's opinion on the probable synonymy of gilvidorsis, quoted by von Hedemann (l.c. No. 3), is quite justified, for I had already examined the two types side by side, and had made a note that gilvidorsis, Z., must sink as a synonym of tenuis, F. & R. Baron von Hedemann has sent me the three specimens which were determined for him by Snellen: two are montis-christi, Wlsm., and the third is pumilio; there is at present no evidence that gilvidorsis occurs in the West Indies.

#### [ STENOPTILIA TENUIS, F. & R.

n. syn. = GILVIDORSIS, Z.

Mimeseoptilus tenuis, F. & R. Reise Nov., Lep. Pl. CXL. 50 (1875) <sup>1</sup>. Mimeseoptilus gilvidorsis, Z. Hor. Soc. Ent. Ross. XIII. 471-2, Pl. VI. 164 (1877) <sup>2</sup>. Hab. Colombia—Bogota <sup>1, 2</sup>, 12 II.-14 III.<sup>2</sup>]

#### 6. Pterophorus, Geoffr.

Type, Phalæna (Alucita) monodactyla, L.

Pterophorus, Geoffr. Hist. Ins. Par. II. 24-5, 90-3 (1762); Wlgrn. Vet.-Ak. Handl. III. (7) 20 (1859); Wlsm. & Drnt. Ent. Mo. Mag. XXXIII. 41-2 (1897).

† ОІДЖМАТОРНОКИЯ, Wlgrn. Vet.-Ak. Handl. III. (7) 19 (1859). [‡ ЕДЕМАТОРНОКИЯ, Wlgrn. Bib. Svensk. Vet.-Ak. Handl. III. 85 (1875).]

= § Leioptilus, Wlgrn. Vet.-Ak. Handl. III. (7) 21 (1859). = \*Alucita (L.), Meyr. Tr. Ent. Soc. Lond. 1890, 487.

The type of Alucita, L., was fixed as pentadactyla, L., by Poda, Ins. Mus. Græc. p. 94 (1761), and Lamarck, Syst. An. sans Vert. 288 (1801), cited the same species as the type of Pterophorus, Geoffr.; but this action was inadmissible, pentadactyla having already been constituted the type of Alucita. Latreille, Préc. Gen. Ins. 148 (1796), described the genus Orneodes, omitting to cite the type; subsequently, however, Hist. Nat. Crust. Ins. III. 418 (1802): XIV. 258 (1805), this omission was remedied, hexadactyla, L., being cited as the type. By this action and Poda's the genus Pterophorus became monotypical with the type Alucita monodactyla, L. Iu this sense it was used by Wallengren, but Meyrick, Tr. Ent. Soc. Lond. 1890, 487, wrongly employed Pterophorus for pentadactyla, and Alucita for monodactyla.

#### 7. Pterophorus inquinatus, Z.

n. syn. =AMBROSIÆ, Mrt.

Edematophorus inquinatus, Z. Verh. z.-b. Ges. Wien, XXIII. 325 (1873)<sup>1</sup>. Edematophorus ambrosiæ, Mrt. Am. Ent. III. 236 (1880)<sup>2</sup>. Edematophorus inquinatus, Cqllt. Pap. I. 61–2 (1882)<sup>3</sup>; Hdm. Stett. Ent. Ztg. LVII. 9 (1896)<sup>4</sup>.

Larva. Ambrosia artemisiæfolia 2,3, VII. 3 excl. VIII.3

Hab. United States — Texas, 23 VII.<sup>1</sup>, Missouri <sup>2</sup>. West Indies — Hayti (Cap Haiti, 19 VI. — Gudmann); St. Thomas, 7 IV.<sup>4</sup>

## 8. Pterophorus montis-christi, sp. n.

= Mimæseoptilus gilvidorsis, Hdm. Stett. Ent. Ztg. LVII. 8-9 (1896), partim.

(Antennæ broken.) Palpi projecting scarcely beyond the head; pale cinereous. Head slightly tufted over the face; hoary grey. Thorax hoary greyish, whitish posteriorly. Fore wings hoary grey, sparsely scattered with very minute fuscous speckling, which is also noticeable along the base of the hoary-grey cilia, especially on the dorsum. Exp. al. 17 mm. Hind wings shining hoary grey, with a bronzy reflection on their cilia. Abdomen [in the two specimens before me greasy and discoloured, but obviously paler than the wing-colour, as indicated also by the very pale patch on the posterior portion of the thorax at the base]. Hind legs with the spurs very long and slender; pale cinereous.

Type, ♂ Mus. Wlsm.; ♀ Mus. Gudmann.

Hab. West Indies — SAN DOMINGO (Monte Christi, 19 V. 1894; two specimens, "\$\operature\text{SAN Q taken in copulâ," \$Gudmann\$)}; St. Croix: 2-5 V. (Hedemann, two specimens); Grenada (Balthazar, 250 ft., windward side, 15 IV., H. H. Smith; one specimen).

#### 9. Pterophorus ossipellis, sp. n.

Antennæ bone-grey. Palpi very short, projecting, slender; bone-white. Head and thorax bone-grey. Fore wings of almost even width throughout; costa straight, second lobe scarcely widened at its middle; uniformly bone-grey, the extreme costa slightly paler throughout; cilia bone-grey. Exp. al. 16 mm. Hind wings bone-grey with a slightly bluer tinge; cilia bone-grey. Abdomen bone-grey. Legs white, unspotted.

Type, ♂ Mus. Gudmann.

Hub. West Indies—San Domingo (Puerto Plata, 15 V.; one specimen, Gudmann).

#### 10. Pterophorus parvus, Wlsm.

Lioptilus ? parvus, Wlsm. Pter. Cal. & Or. 55-7, Pl. III. 12 (1880) <sup>1</sup>.

Hab. United States — California e. VII. West Indies — Grenada (Balthazar, 250 ft., windward side, 15 III.-30 IV.— H. H. Smith).

#### 11. Pterophorus thomæ, Z.

Leioptilus thomæ, Z. Hor. Soc. Ent. Ross. XIII. 480–1, Pl. VI. 170 (1877) <sup>1</sup>. Alucita thomæ, Wlsm. Pr. Z. Soc. Lond. 1891, 495, 542 (1892) <sup>2</sup>. Leioptilus thomæ, Hdm. Stett. Ent. Ztg. LVII. 9 (1896) <sup>3</sup>.

Hab. West Indies—HAYTI (Port-au-Prince, Cap Haiti, 19-24 V.: Gudmann); St. Thomas, XII.<sup>1,3</sup>

## 12. Pterophorus preustus, Mschl.

Pterophorus præustus, Mschl. Ab. Senck. Nat. Ges. XV. 346, 354 (1890)<sup>1</sup>. Alucita præustus, Wlsm. Pr. Z. Soc. Lond. 1891, 496, 542 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

Judging from the description this is probably the same as thome, Z.

## 13. Pterophorus basalis, Mschl.

*Edematophorus basalis*, Mschl. Ab. Senck. Nat. Ges. XV. 345–6, 354 (1890)<sup>1</sup>. *Alucita basalis*, Wlsm. Pr. Z. Soc. Lond. 1891, 495, 542 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

## 14. Pterophorus Paleaceus, Z.

Leioptilus paleaceus, Z. Verh. z.-b. Ges. Wien, XXIII. 326-7 (1873)<sup>1</sup>. Pterophorus paleaceus, Mschl. Ab. Senck. Nat. Ges. XV. 346, 354 (1890)<sup>2</sup>. Alucita paleaceus, Wlsm. Pr. Z. Soc. Lond. 1891, 495, 542 (1892)<sup>3</sup>.

Hab. United States—Ohio 1,3, Texas 1,3. West Indies—Portorico 2,3.

### 15. PTEROPHORUS BIPUNCTATUS, Mschl.

=\*MICRODACTYLUS, Hdm. (nec Hb.).

Pterophorus bipunctatus, Mschl. Ab. Senck. Nat. Ges. XV. 346, 354 (1890) <sup>1</sup>. Alucita bipunctatus, Wlsm. Pr. Z. Soc. Lond. 1891, 496, 542 (1892) <sup>2</sup>. Leioptilus microdactylus, Hdm. Stett. Ent. Ztg. LVII. 9 (1896) <sup>3</sup>.

Hab. UNITED STATES—Florida (Morrison, Mus. Wlsm.). West Indies — Portorico<sup>1,2</sup>; St. Croix, 28 IV. (Gudmann); St. Thomas, 20 III. (Gudmann), IV.<sup>3</sup>; Grenada (Balthazar, 250 ft.,

windward side, 5-27 IV.—H. H. Smith).

I am unable to agree with Heer Snellen, as quoted by Baron von Hedemann (l. c. No. 3), that the West-Indian species allied to microdactylus, Hb., is actually our common European insect. Baron von Hedemann has sent me the specimen determined for him by Snellen, and I must certainly regard it as distinct. A very noticeable spot occurs on the lower margin of the anterior lobe of the fore wings a little beyond the opposite costal spot, and this is not present in microdactylus; moreover, the anterior wings appear to me to be distinctly narrower in proportion to their length. In any case there can be little doubt that it is the bipunctatus of Möschler.

16. Pterophorus participatus, Mschl.

Pterophorus participatus, Mschl. Ab. Senck. Nat. Ges. XV. 346, 354 (1890) <sup>1</sup>. Alucita participatus, Wlsm. Pr. Z. Soc. Lond. 1891, 496, 542 (1892) <sup>2</sup>.

Hab. West Indies-Portorico 1, 2.

## 17. Pterophorus agraphodactylus, Wkr.

n. syn. = ASPILODACTYLUS, Wkr.

Pterophorus agraphodactylus, Wkr. Cat. Lep. Ins. B. M. XXX. 941 (1864)<sup>1</sup>. Pterophorus aspilodactylus, Wkr. Cat. Lep. Ins. B. M. XXX. 941–2 (1864)<sup>2</sup>; Butl. Pr. Z. Soc. Lond. 1878, 495<sup>3</sup>. Lioptilus agraphodactylus, Wlsm. Pter. Cal. & Or. 46–7, Pl. III. 6 (1880)<sup>4</sup>. Pterophorus agraphodactylus, Wlsm. Pr. Z. Soc. Lond. 1891, 496, 542 (1892)<sup>5</sup>. Pterophorus aspilodactylus, Wlsm. Pr. Z. Soc. Lond. 1891, 496, 542 (1892)<sup>6</sup>.

Hab. United States—Oregon, V. West Indies—Jamaica 2, 3, 6; San Domingo 1, 4, 5.

I can only regard the type of aspilodactylus as a worn specimen of agraphodactylus, and Walker himself suggested that it might be only a variety or a faded example of this species.

#### II. ORNEODIDÆ.

7. Orneodes, Ltr.

=\*Alucita, Z., auct.

18. Orneodes Eudactyla, F. & R.

Alucita (Peelia?) cudactyla, F. & R. Reise Nov., Lep. Pl. CXL.

62 (1875)<sup>1</sup>; Mschl. Ab. Senck. Nat. Ges. XV. 346, 354 (1890)<sup>2</sup>. Orneodes eudactyla, Wlsm. Pr. Z. Soc. Lond. 1891, 496, 542 (1892)<sup>3</sup>.

Hab. COLOMBIA 1,3; BRAZIL 1,3. West Indies—Portorico 2,3.

#### II. TINEINA.

#### I. ÆGERIADÆ.

Although I quite agree with Mr. Meyrick as to the location of this family, I am not at present sufficiently acquainted with its literature to attempt to give a complete list of the West-Indian species. There are probably many other species known beside the following:—

#### S. SESIA, F.

#### 19. SESIA CUBANA, HS.

Sesia cubana, HS. C.B., Z.M. Ver. Regensb. (sep.) 28 (1865) 1. Hab. West Indies—Cuba 1.

#### II. GELECHIADÆ.

#### 9. Brachmia, Hb.

= $\dagger B_{RACLUNIA}$ , Stph. (laps. cal.).

 $= \S C_{LADODES}$ , Hein.

 $= E_{UDODACLES}$ , Snell.

Brachmia, Meyr. (nec Stgr. Cat.).

## 20. Brachmia? fulvidella, sp. n.

Antennæ dull ochreous. Palpi dull ochreous, the second and apical joints each with a tawny-reddish shade externally. Head and thorax whitish ochreous. Fore wings whitish ochreous, variable in the colour and quantity of their shading; a female in good condition (which I select as the type) having a tawny-reddish suffusion extending from the base nearly to the termen, around which is a row of six elongate fuscous spots, the pale groundcolour appearing also in a narrow streak along the base of the fold and in a streak along the discal cell, in which are two fuscous blotches, the larger before, the smaller one beyond the middle; cilia whitish ochreons, with a slight vinous gloss, especially around their tips. (In other specimens the dorsal half of the wing is almost entirely whitish ochreous, the reddish suffusion being confined to the costal and apical portions.) Exp. al. 15 mm. Hind wings pale greyish; cilia with a slight ochreous tinge. Abdomen yellowish grey. Legs pale ochreous.

Type, of Q Mus. Wism.

Hab. West Indies — St. Thomas, 9 III.-20 IV. (Gudmann, Hedemann). Six specimens.

"Die Raupe ist sehr dünn und schmal, 16-füssig, in der Mitte am breitesten; dunkel chocoladebraun, mit zwei Reihen feiner weissen Punkte auf jeder Seite des Rückens, so dass auf jedem Segment zwei Punktwarzen sich finden, jede mit einem schwarzen Haar versehen. Kopf rund, schwarzbraun. Das erste Leibsegment durchsichtig fleischfarbig im ersten Drittel, auf den hinteren  $\frac{2}{3}$  mit einem Schild von der Farbe des Kopfes. Bauch, Füsse und After von der Farbe des Rückeus.

"Raupe auf den Blättern der Bromelia pinguin, L., gefunden in einem Gespinnst mit eingewobenen Excrementen und Blattresten. Das Gespinnst befindet sich in der inneren Höhlung des Blattes, dicht an der Blattwurzel. Anscheinend frisst die Raupe nicht die Blätter, sondern nur die Blattreste, die sie in ihr Gespinnst

festwebt." (Gudmann.)

I am unable to separate from the types three slightly smaller captured females in which the tawny-reddish suffusion is much modified by greyish-fuscous sprinkling, and the pale ochreous ground-colour inclines to pale cinereous.

This species differs from the type of the genus in having veins 7 and 8 coincident, arising from a common stem with 9; but at present I am unwilling to create a new genus for its reception.

### 10. ARISTOTELIA, Hb., Meyr.

This genus has been separated into sections under various names, such as *Evagora*, Clem., *Apodia*, Hein., *Ergatis*, Hein. The first two names are preoccupied, and *Ergatis* is a synonym of *Aristotelia*.

Aristotelia is used in a more extended sense in this paper than is accorded to it by Meyrick. At present it seems unnecessary to rename the different sections as here given, but this can be done at any future time if the subdivisions founded on neuration should be regarded as of sufficient value; when probably some of Walker's or Chambers's generic names will be found to apply.

The species which have veins 3 and 4 of the hind wings connate are narrow-winged derivatives of *Aristotelia*, and are not allied to *Gelechia*.

§ A. Fore wings, 7 and 8 stalked, 6 out of 7. Hind wings, 3 and 4 connate. (= § EVAGORA, Clem.)

## 21. Aristotelia annulicornis, sp. n.

Antennæ pale straw-ochreous, minutely banded above with greyish fuscous, a distinct blackish band across the middle of the basal joint. Palpi pale straw-ochreous, with two smoky-black spots on the outer side of the second joint and a smoky-black ring near the end of the apical joint. Head and thorax pale straw-ochreous. Fore wings pale straw-ochreous, with a slight ferruginous shade along the middle from one-third to two-thirds, and several smoky-black spots and dots: the first at the base of the costa,

small and inconspicuous; at one-third a larger costal spot, with one, immediately above the dorsum, straight below it; at two-thirds a larger costal spot, with a very small one straight below it at the end of the cell, a few smaller ones lying around the apex and apical margin; cilia pale straw-ochreous with a slight vinous gloss. Exp. al. 8 mm. Hind wings pale grey; cilia with a slight vinous gloss. Abdomen yellowish grey. Legs whitish ochreous.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 12 III.-14 IV. (Gudmann, Hedemann). Four specimens.

#### 22. Aristotelia eromene, sp. n.

Antennæ stout; whitish ochreous, faintly annulated towards the apex. Palpi stout, second joint almost as long as the apical, smooth-scaled; whitish ochreous, clouded with fuscous externally, especially at the base and apex of the second joint, apical joint with two black annulations. Head and thorax pale ochreous. Fore wings pale ochrous, somewhat shaded with chestnut-brown along the middle; an elongate black costal spot at the base with a smaller one immediately beneath it; a small triangular costal spot before the middle, almost connected with two others placed obliquely beneath it, extending backward to the dorsum; a larger triangular costal spot (also black) before the commencement of the costal cilia; on the dorsum, beneath and before it, a slender black streak lies a little beyond the middle but does not leave the margin; a terminal series of small groups of black scales at the base of the greyish-ochreous cilia. Exp. al. 9 mm. Hind wings shining, pale grey; cilia shining, pale ochreous. Abdomen shining, greyish. Posterior legs whitish ochreous, externally smeared with fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Thomas, 20 III. (Gudmann); St. Croix, 2 V.-9 VI. (Hedemann, Pontoppidan). Three specimens.

Bred at St. Thomas by Mr. Gudmann from larvæ feeding on

Bromelia pinguin, L.

This species differs from annulicornis, Wlsm., in the first dorsal spot being nearer to the base than the costal spot above it and in the larger size of the outer costal spot, as well as in the darker tone of colouring of the fore wings and in the absence of the annulation on the basal joint of the antennæ.

## 23. Aristotelia ornatipalpella, sp. n.

Antennæ rather stout, simple; cinereous with a slight indication of dark transverse lines above. Palpi smooth; olive-grey, with three black annulations on the second joint and two on the apical joint. Head and thorax dark olive-grey. Fore wings olive-grey, with a slight greenish tinge; a short black basal patch occupying the costal half is followed by a smaller costal patch at one-third, with a black dorsal patch a little beyond it; at the upper extremity

of the latter is a round black spot on the cell, almost connected with it; another small black costal patch lies at the commencement of the costal cilia and a round black dot beneath it at the end of the cell; a few black scales are scattered along the termen at the base of the olive-grey cilia. Exp. al. 8 mm. Hind wings shining, grey; cilia pale brownish grey. Abdomen brownish grey. Legs greyish, with dark patches on the spurs; hind tibiæ somewhat hairy above, tarsi faintly spotted.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 27 IV.—H. H. Smith). Unique.

### 24. Aristotelia ostariella, sp. n.

Antennæ bone-white, very faintly annulated. Palpi slender, smooth, second joint scarcely thicker than the apical; bone-white, speckled with greyish fuscous. Head and thorax bone-whitish. Fore wings bone-whitish; a small greyish-fuscous spot at the base of the costa is followed by a small triangular costal spot before the middle, forming, with two others below it, a narrow transverse fascia tending slightly outwards to the dorsum; halfway between this and the apex is another greyish-fuscous costal patch with a dark fuscous spot below it at the end of the cell; a few greyish-fuscous scales around the termen at the base of the bone-ochreous cilia. Exp. al. 8 mm. Hind wings shining, very pale grey; cilia pale greyish ochreous. Abdomen greyish ochreous. Legs pale whitish ochreous.

Type, & Mus. Gudmann.

Hab. West Indies—St. Thomas, 22-31 III. (Gudmann). Two specimens.

## 25. Aristotelia kittella, sp. n.

Antennæ (broken): basal joints black with a white annulation. Palpi smooth, very slender, second joint as long as the apical joint and scarcely to be distinguished from it in thickness; black externally with white annulations, one on the second joint and three on the apical. Head sooty-black. Thorax cream-white, with a black transverse band anteriorly which also crosses the base of the white tegulæ. Fore wings cream-white; a small black costal spot at the base, a broad black transverse fascia before the middle, slightly attenuated at its centre, and a triangular black costal spot halfway between the fascia and the apex, this is preceded by a small black spot on the dorsum and followed by a few black scales on the termen below the apex; cilia cream-white. Exp. al. 7 mm. Hind wings shining, very pale grey; cilia with a slight yellowish tinge. Abdomen grey; anal tuft subochreous. Legs shining, cream-whitish.

Type, 3 Mus. Gudmann.

Hab. West Indies—Hayti (Port-au-Prince, 22 V., Gudmann). Unique.

#### 26. Aristotelia dorsivittella, Z.

Gelechia (Teleia?) dorsivittella, Z. Verh. z.-b. Ges. Wien, XXIII. 267-8, Pl. III. 20 (1873)<sup>1</sup>. Gelechia dorsivittella, Chamb. Bull. U. S. G.G. Surv. IV. 143 (1878)<sup>2</sup>; Riley, Smith's List Lep. Bor. Am. 101. No. 5357 (1891)<sup>3</sup>.

Hab. UNITED STATES 2,3—Texas 1. West Indies—St. Croix, 6-14 V. (Gudmann, Hedemann).

# §B. Fore wings, 7 and 8 stalked, 6 out of 7. Hind wings, 3 and 4 separate.

#### 27. Aristotelia Roseosuffusella, Clem.

## = BELLELA, Wkr.16

Gelechia? roseosuffusella, Clem. Pr. Ac. Nat. Sc. Phil. XII. 162-3, 434 (1860) <sup>1</sup>: Pr. Ent. Soc. Phil. II. 121 (1863) <sup>2</sup>. Gelechia bellela, Wkr. Cat. Lp. Ins. B.M. XXIX. 595 (1864) <sup>3</sup>. Gelechia roseosuffusella, Stn. Tin. N. Am. pp. x, 40, 113-4, 225 (1872) <sup>4</sup>; Chamb. Can. Ent. IV. 69, 148, 169, 193 (1872) <sup>5</sup>. Gelechia (Ergatis) roseosuffusella, Z. Verh. z.-b. Ges. Wien, XXIII. 272-3, Pl. IV. 24 (1873) <sup>6</sup>. Gelechia roseosuffusella, Mrt. Can. Ent. VI. 222 (1874) <sup>7</sup>; Chamb. Can. Ent. VI. 231 (1874) <sup>8</sup>. Gelechia roseosuffusella, Chamb. Cin. Qr. Jr. Sc. II. 290 (1875) <sup>9</sup>. Gelechia roseosuffusella, Chamb. Bull. U.S. G.G. Surv. III. 125 <sup>10</sup>, 141 (1877) <sup>11</sup>: Can. Ent. IX. 14 (1877) <sup>12</sup>: Bull. U.S. G.G. Surv. IV. 110 <sup>13</sup>, 146 (1878) <sup>14</sup>: Jr. Cin. Soc. N. H. II. 183 (1880) <sup>15</sup>. Gelechia (Ergatis) roseosuffusella, Wlsm. Tr. Am. Ent. Soc. X. 180 (1882) <sup>16</sup>. Gelechia roseosuffusella, Riley, Smith's List Lep. Bor. Am. 102. No. 5470 (1891) <sup>17</sup>.

Hab. UNITED STATES 1-17, VII.6, VIII.9 Larva Trifolium pratense 7,13. West Indies—San Domingo (Monte Christi, 17 V., Gudmann).

## 28. ARISTOTELIA PUDIBUNDELLA, Z.

## n. syn. = INTERMEDIELLA, Chamb.

Gelechia (Ergatis) pudibundella, Z. Verh. z.-b. Ges. Wien, XXIII. 273-4 (1873)<sup>1</sup>. Gelechia intermediella, Chamb. Bull. U.S. G.G. Surv. IV. 89, 144 (1878)<sup>2</sup>. Gelechia pudibundella, Chamb. Bull. U.S. G.G. Surv. IV. 146 (1878)<sup>3</sup>. Gelechia intermediella, Wlsm. Tr. Am. Ent. Soc. X. 180-1 (1882)<sup>4</sup>. Gelechia (Ergatis) pudibundella, Wlsm. Tr. Am. Ent. Soc. X. 181 (1882)<sup>5</sup>. Gelechia intermediella, Riley, Smith's List Lep. Bor. Am. 101. No. 5392 (1891)<sup>6</sup>. Gelechia pudibundella, Riley, Smith's List Lep. Bor. Am. 102. No. 5454 (1891)<sup>7</sup>.

Hab. United States 1-7, VII. West Indies—Hayti (Cap Haïti, 18 V., Gudmann); St. Croix, 28 IV.-7 V. (Hedemann), 7 VII. (Pontoppidan).

#### 29. Aristotelia trossulella, sp. n.

Antennee brownish fuscous, annulated with white beyond their basal fourth. Palpi long, slender, smooth, apical joint somewhat longer than the second; subochreous, the second joint transversely banded with three brownish bars, the apical joint with slender brownish longitudinal lines. Head and thorax olive-brown. Fore wings bright olive-brown; from the extreme base an oblique leaden-grey line extends downwards to the dorsum at one-fifth; beyond it an oblique black line leaving the costa at one-fifth reaches nearly to the dorsum, accompanied throughout on its onter edge by a pinkish-ochreous line followed by steel-grey scales; a patch of steel-grey scales a little before the middle of the costa scarcely reaches beyond the upper margin of the cell, and is followed beyond the middle by a small pinkish-ochreous costal dot connected by some steel-grey scales with an inwardly oblique pinkish-ochreous line reverting towards the middle of the dorsum, black-margined on its inner edge and with steel-grey scales externally; some spots of steel-grey scales lie a little above the tornus, others being seattered around the termen and the inner extremities of a series of pinkish ochreons spots which, to the number of about seven, follow the margin of the wing at the base of the costal and terminal cilia and are separated by some dark fuscous scales; cilia subochreous along their base, ontwardly with two slender grey lines running through them except at the tornus where they are uniformly grevish. Exp. al. 10 mm. Hind wings grey; cilia paler. Abdomen brownish grey. Legs whitish ochreous, obliquely banded with greyish fuscous externally.

Type, & Mus. Gudmann.

Hab. West Indies—Jamaica (Kingston, 19 VII., Cockerell); San Domingo (Monte Christi, 19 V., Gudmann). Two specimens.

## 30. Aristotelia pulicella, sp. n.

Antennæ stoutish,  $\frac{2}{3}$ ; greyish, with some darker bands towards the apex. Palpi: second joint longer than the apical; whitish, the second joint with two black spots beneath, apical joint with two black rings, one at the base the other before the apex. Head and thorax whitish grey. Fore wings whitish grey, shaded with greyish fuscous, especially along the costal third; this is interrupted on the costa by a pale median space and some pale speckling before the apex; some minute blackish dots are scattered along the line of the fold, with one on the disc before the middle and a few black scales beneath the apex at the base of the yellowish-grey cilia. Exp.~al.~7 mm. Hind~wings brownish grey; cilia yellowish grey. Abdomen yellowish grey. Legs whitish ochreous, the tibiæ broadly banded externally and the tarsi minutely spotted posteriorly with fuscous.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 7-SIII. (Gudmann, Hedemann). Three specimens.

#### 31. Aristotelia crassicornis, sp. n.

Antennæ stout, somewhat flattened; very pale cinereous. Palpi slender, second joint longer than the apical, slightly roughened beneath especially at the extremity of the second joint; whitish, shaded externally nearly to the end of the second joint, apical joint faintly biannulate. Head and thorax hoary whitish. Fore wings hoary whitish, sprinkled with greyish-fuscous scaling; with numerous short, slender, dark fuscous longitudinal streaklets accompanied by a few ferruginous scales, these have a tendency to follow the lines of the cell and of the fold, being only indicated on the costa by a minute streak at the base and two spots, one before the other behind the middle; cilia hoary whitish dusted with fuscous atoms. Exp. al. 8 mm. Hind wings shining, pale grey; cilia yellowish grey. Abdomen shining, iridescent, silvery grey. Legs whitish, tarsi unspotted.

Type, & Mus. Wlsm.

Hab. West Indies—St. Jan, 13-16 IV. (Gudmann). Two

specimens, bred from a plant which was not identified.

"Raupe cylindrisch, 16-füssig, bläulich hellgrün mit einem rothen Gürtel, bestehend aus vier dunkelrothen Flecken in der Einschnürung zwischen den Segmenten, und zwei grössere rothe Flecke stehen am Rücken jedes Segments. Kopf hellbraun, Füsse von der Grundfarbe; das letzte Leibsegment bläulich grün, mit einem grossen rothen Flecke auf dem Rücken.

"Die Raupen leben zu zwei, drei oder vier gesellig zwischen zusammengesponnenen Blättern, und alle Excremente werden theils zwischen den Blättern, theils ausserhalb des Randes der Blattwohnung festgesponnen, so dass die Raupen ganz versteckt

sind." (Gudmann).

# § C. Fore wings, 7 and 8 stalked, 6 separate. Hind wings, 3 and 4 separate.

## 32. Aristotelia picticornis, sp. n.

Antennee delicately annulated with white and blackish. Palpi very slender, smooth; beautifully marked with alternate rings of white and fuscous throughout. Head and thorax brownish fuscous. Fore wings brownish fuscous, evenly speckled and mottled with ashy grey throughout; a faint indication of a dark spot beyond the middle of the fold and groups of ashy-grey scales around the termen at the base of the ashy-grey cilia, through which run a slender dark dividing line beyond their middle. Exp. al. 10 mm. Hind wings as broad as the fore wings; pale chestnut-grey; the cilia about the termen grey, along the dorsum inclining to chestnut. Abdomen brownish ochreous. Legs with alternate rings of white and fuscous.

Type, & Mus. Hedemann.

Hab. West Indies - St. Croix, 2 V. (Hedemann). Unique.

# 11. Eucatoptus, g. n. (εὐκάτοπτος=easily seen.)

Type, Eucatoptus penicillata, Wlsm.

Antennæ  $(\frac{3}{4})$ ,  $\delta$  very shortly ciliate; without pecten.

Maxillary palpi very short.

Labial palpi recurved; apical joint pointed, almost as long as the second; second joint somewhat flattened laterally, not roughly clothed beneath.

Haustellum well developed. Head and thorax smooth.

Fore wings with the costa evenly arched; apex depressed, bluntly pointed; termen oblique, tornus evenly rounded. Neuration: 12 veins, 7 and 8 stalked, 7 to costa, 6 separate (6 sometimes out of 7,

e. g chalybeichroa).

Hind wings hardly 1, elongate, trapezoidal; apex produced, pointed; termen emarginate beneath apex; tornus angular, dorsum straight; cilia  $1\frac{1}{2}$ ;  $\sigma$  with long pencil of expansible hairs from the base of the costa (extending almost the length of the cell of the fore wings). Neuration: 8 veins; 3, 4, and 5 remote, almost parallel, 6 and 7 remote.

Abdomen slender.

Legs: hind tibiæ thinly haired above.

Closely allied to Aristotelia, Hb., from which it is distinguished by the costal hair-pencil of the  $\delta$ .

# § A. Fore wings, 7 and 8 stalked, 6 out of 7. Hind wings, 3 and 4 separate.

## 33. Eucatoptus chalybeichroa, sp. n.

Antennæ: basal joint somewhat enlarged and flattened in the d; whitish cinereous, very faintly annulated with two darker bands towards the apex. Palpi: second joint as long as the apical joint, somewhat roughly clothed; dirty whitish, with two fuscous spots on the second joint externally and two fuscous annulations on the apical joint. Head and thorax dirty whitish, speckled with cinereous. Fore wings brownish cinereous, with a steely gloss throughout and some ferruginous scaling, especially on the outer half; at the extreme base of the costa is a small dark fuscous spot, narrowly connected with an oblique narrow broken fascia of the same colour, extending outwards to the dorsum, which it reaches at about one-fourth the wing-length; beyond this is a minute black spot on the outer half of the fold, the remainder of the wing to the apex being speckled with black scales, some preceded by whitish; on the costa before the apex is an elongate shining whitish spot, followed by black speckling around the base of the terminal cilia which partake of the wing-colour, but tending to pale grey at the tornus, with a dark shade running

around their extreme tips. Exp. al. 9 mm. Hind wings: 3 with a strong expansible hair-pencil at the base of the costa; shining pale steel-grey; cilia with a slight yellowish tinge. Abdomen shining pale brownish cinereous. Legs whitish cinereous, much speckled with greyish fuscous.

Type, ♀ Mus. Wlsm.; ♂ Mus. Gudmann.

Hab. West Indies—St. Thomas, 4-8 IV. (bred from Acacia arabica—Gudmann).

§ B. Fore wings, 7 and 8 stalked, 6 separate. Hind wings, 3 and 4 separate; with costal hair-pencil in 3.

#### 34. EUCATOPTUS PENICILLATA, sp. n.

Antennæ grevish. Palpi: second joint smooth but somewhat stout; white, but spotted externally with greyish fuscous, the apical joint biannulate with the same. Head whitish ochreous. Thorax light ochreous. Fore wings ochreous, mottled with greyish fuscous and metallic steel-grey, with creamy-white streaks and spots; an oblique greyish-fuscous patch, edged with blackish scales externally, extends from the base of the costa nearly to the dorsum and is immediately followed by a triangular whitish streak of equal length; two small whitish spots on the costa beyond it are followed around the termen by short streak-spots through the terminal cilia; two small black dots lie on the cell, the first at one-half, the other at its end; the steel-grey mottling appears to accompany the paler markings, except in the case of one patch near the tornus: a rosy tinge appears beyond the edge of the cell and between the black dots upon it; cilia rosy grevish. Exp. al. 10 mm. Hind wings: of with a conspicuous, long, brownish ochreous, expansible hair-pencil arising near the base of the costa; pale grey, cilia brownish grey. Abdomen brownish grey. Legs whitish, faintly spotted externally.

Type, ♀ Mus. Gudmann; ♂ Mus. Wlsm.

Hab. West Indies—Hatti (Cap Haïti, 20 V., Gudmann); San Domingo (Monte Christi, 12 V., Gudmann); St. Croix, 28 IV. (Hedemann); St. Thomas, 12-31 III. (Gudmann, Hedemann).

## 35. EUCATOPTUS RUBIDELLA, Clem.

= RUBENSELLA, Chamb. <sup>9</sup>; = \*PUDIBUNDELLA, Chamb. (ncc Z.). Gelechia? rubidella, Clem. Pr. Ac. Nat. Sc. Phil. XII. 163, 434 (1860) <sup>1</sup>: Pr. Ent. Soc. Phil. II. 121 (1863) <sup>2</sup>; Stn. Tin. N. Am. pp. x, 40, 115, 225 (1872) <sup>3</sup>. Gelechia rubensella, Chamb. Can. Ent. IV. 193-4 (1872) <sup>4</sup>; Mrt. Can. Ent. VI. 222 (1874) <sup>5</sup>. Gelechia pudibundella, Chamb. Can. Ent. IX. 23 (1877) <sup>6</sup>. Gelechia rubensella, Chamb. Bull. U.S. G.G. Snrv. IV. 89, 147 (1878) <sup>7</sup>. Gelechia rubidella, Chamb. Bull. U.S. G.G. Surv. IV. 147 (1878) <sup>8</sup>. Gelechia (Ergatis) rubidella, Wlsm. Tr. Am. Ent. Soc. X. 180-1 (1882) <sup>9</sup>. Gelechia rubensella, Pack. U.S. Dept. Agr. Rp. Ent. V.

220, No. 387 (1890) 10. Gelechia rubidella, Riley, Smith's List Lep. Bor. Am. 102. No. 5471 (1891) 11.

Hab. United States 1-11, VIII. Larva Quercus 5, 10. West Indies—St. Croix, 24-6 IV. (Hedemann); St. Thomas, 9 III. (Gudmann).

## 36. Eucatoptus lycopersicella, sp. n.

Antennæ mouse-grey, faintly annulated. Palpi rather short, somewhat stout, smooth; greyish fuscous externally, with four white bands; uniformly whitish on their inner side. Head and thorax mouse-grey. Fore wings greyish fuscous, evenly sprinkled with mouse-grey and some ferruginous; without describable markings, except a series of small groups of blackish scales around the termen at the base of the cilia, which are the same colour as the wing, except at the tornus where they are plain greyish. Exp. al. 9 mm. Hind wings: 3 with a long ochreous hair-pencil above from the base of the costal margin; grey, cilia the same. Abdomen greyish. Legs whitish ochreous, laterally banded with greyish fuscous externally; hind tibiæ with ochreous hairs above.

Type, ♀ Mus. Wlsm.; ♂ Mus. Gudmann.

Hab. West Indies—St. Croix, 3-5 V. (Gudmann). Two specimens.

"Die Raupe lebt an Lycopersicum in einem umgeschlagenen Blattrande, von welcher Wohnung es, wenn es frisst, geht minirend in das Blatt hinein." (Gudmann.)

## 12. Geniadophora, gen. n.

 $(\gamma \epsilon \nu \epsilon \iota \acute{a}s = a \text{ beard}; \phi \circ \rho \epsilon \hat{\iota} \nu = \text{to bear.})$ 

Type, Pecilia extranea, Wlsm.

Antennæ more than  $\frac{2}{3}$ ; basal joint long and slender.

Maxillary palpi minute.

Labial palpi recurved, divergent; apical joint as long as second; second joint with a divided comb-like brush beneath, extending also less conspicuously above it at its outer end.

Haustellum moderate.

Ocelli present.

Head and thorax smooth.

Fore wings narrow, elongate, apex slightly rounded, termen obliquely rounded. Neuration: 12 veins, 7 and 8 stalked, 7 to apex, the others separate.

Hind wings narrower than the fore wings, apex acute, termen obliquely bisinuate, dorsum parallel with costa. Neuration: 8 veins, 3 remote from 4, 6 and 7 separate, 5 approximated to 4.

Legs: hind tibiæ with long fine hairs above.

## 37. Geniadophora extranea, Wlsm.

Pæcilia extranea, Wlsm. Pr. Z. Soc. Lond. 1891, 521-2, 546 (1892) 1.

Hab. West Indies-St. VINCENT, V.1; GRENADA (H. H. Smith).

## 13. Xenolechia, Meyr.

### 38. Xenolechia glandiferella, Z.

 $= s_{ELLA}$ , Chamb. <sup>3</sup>

Gelechia (Anacampsis) glandiferella, Z. Verh. z.-b. Ges. Wien, XXIII. 275-6, Pl. IV. 25 (1873) <sup>1</sup>. Gelechia sella, Chamb. Can. Ent. VI. 238 (1874) <sup>2</sup>. Gelechia glandiferella, Chamb. Can. Ent. IX. 14 <sup>3</sup>, 24 (1877) <sup>4</sup>: Bull. U.S. G.G. Surv. IV. 144 (1878) <sup>5</sup>; Riley, Smith's List Lep. Bor. Am. 101. No. 5382 (1891) <sup>6</sup>.

Hab. United States 1-6, VII. 1, VIII. 1, IX.2 West Indies—Grenada (Mount Gay Estate, 300 ft., leeward side. 25-30 VIII.—

(*H. H. Smith*).

Professor Riley (l. c. No. 6) sunk Gelechia pallidochrella, Chamb., as a synonym of this species, but under his number 5439 he retained it as a distinct species. Although it is obvious that pallidochrella is closely allied to glandiferella, I am not quite convinced that it is synonymous with it.

#### 14. GELECHIA, Hb.

#### 39. GELECHIA FLAMMULELLA, sp. D.

Antennæ pale brownish. Palpi long, recurved, overarching the head, the second and third joints of almost equal length and stoutness; whitish, banded with chestnut-brown above (three bands on the second and two on the apical joint). Head hoary-greyish. Thorax whitish ochreous; tegulæ shaded with brown. Fore wings brownish ochreous along the costal, tawny-brown along the dorsal half, without any dividing line, the two colours blending beyond the middle; from the costa at the base a dark chocolate-brown shade curves downwards and outwards, ending in a conspicuous dash along the lower edge of the cell before the middle, its upper edge narrowly margined with whitish throughout, a minute dot of the same dark colour at the lower angle of the cell; the whole wing suffused with a rich vinous gloss; cilia brownish ochreous. Exp. al. 13.5 mm. Hind wings broader than the fore wings; grey; cilia inclining to brownish ochreous. Abdomen shining, yellowish grey; with a fuscous spot on the sides of each segment beneath. Legs with the hind tibie hairy above; shining, whitish with a slight ochreous tinge, two or three spots on the outer sides of the tibiæ; the two anterior pairs of legs are whitish, with numerous brownish fuscous bands.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 6-11 III. (Gudmann, Hedemann). Two specimens.

## 40. Gelechia perspicua, sp. n.

Antennæ with the basal joint very long and slender; dark brown, faintly annulated with whitish ochreous. Palpi very long, recurved, slender, the apical joint as long as the second; dark brown, mottled

with whitish ochreous. Head whitish, mottled with dark brown. Thorax dark brown, with faint whitish specklings at the tips of the scales; a silvery spot behind at the base of the abdomen. Fore wings dark brown, much mottled with whitish ochreous, mingled with iridescent green reflections; the paler colouring does not extend to the base but only to the sinuate oblique outer edge of a strongly-marked dark basal patch, the green metallic reflections being especially noticeable beyond its outer margin; below the middle of the costal margin is a small ocelloid spot with a dark brown centre, and the pale upper margin is preceded by a smaller one and followed by a third spot a little more distant from it, which forms the outer extremity of a dark brown shade; three patches of raised whitish-ochreous scales, the first on the disc before the middle, and two below the disc almost reaching the dorsum, the one before the other behind the middle; the apical portion of the wing is much mottled and contains a paler costal patch at onefourth from the apex; cilia dark brown, at the apex mottled with whitish ochreous and tending to dull grey at the tornus. Exp. al. 13 mm. Hind wings very transparent, the veins indicated by greyish brown, the intermediate spaces except at the apex with bright steel-blue iridescence; cilia brownish grey. Abdomen greyish brown. Hind legs dark brown, spotted and banded with whitish ochreous.

Type, & Mus. Gudmann.

Hab. West Indies—Hayti (Cap Haïti, 18 V., Gudmann).

This species has somewhat the appearance of Xenolechia humer-

alis, Z.

## 41. GELECHIA TRANSLUCIDA, WISIN.

Bryotropha translucida, Wlsm. Pr. Z. Soc. Lond. 1891, 520, 545 (1892).

Hab. West Indies—Dominica<sup>1</sup>; St. Vincent<sup>1</sup>; Grenada (Balthazar, 250 ft., windward side, 27 IV.; Mount Gay Estate, 300 ft., leeward side, 3-10 IX.—H. H. Smith).

In the original description, by a clerical error, the type was

recorded as a  $\mathcal{Q}$ ; it is a  $\mathcal{J}$ .

## 42. Gelechia sphenophora, sp. n.

Antennæ brownish grey. Palpi brownish fuscous; apical joint with a pale ochreous spot at its apex. Head and thorax brownish grey. Fore wings olive-brown, inclining to ferruginous at the base, the lighter basal patch is bounded externally by an oblique cuneiform ochreous streak, tending outwards from the costa at one-fifth from the base and reaching to the fold; a small ochreous spot lies at the end of the discal cell, and a larger, rather paler, costal spot at the commencement of the costal cilia; around the termen are four or five ill-defined pale ochreous spots before the commencement of the olive-brown cilia. Exp. al. 10 mm. Hind wings blue-grey; cilia brownish grey. Abdomen brownish grey. Legs whitish

ochreous, obliquely banded on the tibiæ and broadly annulated on the tarsi with brownish grey.

Type,  $\eth \ Q \ \text{Mus. Wlsm.}$ 

Hab. West Indies—Grenada (Mount Gay Estate, 300 ft., leeward side, 1-5 X.; Balthazar, 250 ft., windward side, 5 IV.-8 V.—H. H. Smith). Four specimens.

#### 43. Gelechia crocipunctella, Wlsm.

Lita crocipunctella, Wlsm. Pr. Z. Soc. Lond. 1891, 520-1, 546 (1892) 1.

Hab. West Indies—St. VINCENT 1.

#### 44. Gelechia leucocephala, sp. n.

Antennæ dark fuscous. Palpi white, the second joint with a single dark spot at its base; apical joint with two dark annulations, the first at the base, the other just before the apex. Head and face white. Thorax pale ochreous; tegulæ brownish fuscous. Fore wings pale ochreous, with dark brownish-fuscous mottlings or ill-defined patches; the first at the base reaching the costa, but not the dorsum, is connected narrowly on the costa and along the fold with a second, which is larger and extends nearly to the middle of the wing but does not cross the fold, this is also narrowly connected along the costa with a smaller costal patch at two-thirds from the base, a few dark fuscous scales lying at the end of the cell below it; cilia pale ochreous, some dark fuscous scaling lying at their base along the termen and apex. Exp. al. 10 mm. Hind wings pale shining grey; cilia pale greyish ochreous. Abdomen pale ochreous. Legs whitish ochreous.

Type, ♂ Mus. Gudmann.

Hab. West Indies—St. Thomas, 6 III. (Gudmann). Unique.

## 45. Gelechia capitella, F.

n. syn. = ROBUSTELLA, Wkr.; n. syn. = RIVULELLA, Mschl.

Alucita capitella, F. Ent. Syst. III. (2) 330. No. 2 (1794)<sup>1</sup>. Phalæna (Alucita) capitella, Turton, Syst. Nat. III. 379 (1806)<sup>2</sup>. Gelechia robustella, Wkr. Cat. Lp. Ins. B. M. XXIX. 597 (1864)<sup>3</sup>. Gelechia rivulella, Mschl. Ab. Senck. Nat. Ges. XV. 344, 354 (1890)<sup>4</sup>. Gelechia robustella, Wlsm. Pr. Z. Soc. Lond. 1891, 519, 545 (1892)<sup>5</sup>. Gelechia rivulella, Wlsm. Pr. Z. Soc. Lond. 1891, 519, 545 (1892)<sup>6</sup>.

Hab. West Indies—Jamaica 3,5; Portorico 4,6; [St. Croix (?="America Insulis, Dr. Pflug"1), Wlsm.]; St. Thomas, 6 III. -5 IV. (Gudmann, Hedemann).

Bred by Baron von Hedemann, but the plant not identified. "It was bred from a very small plant growing on very dry sandy places, where also the moth was to be found in abundance" (Hdm.).

Fabricius obtained this species from Dr. Pflug, who died in St. Croix, which island is probably indicated by "in Americae

Insulis." Fabricius's description is sufficiently good to leave little doubt that he had *robustella*, Wkr., before him. I have examined Walker's type, and consider Möschler's description of *rivulella* to refer to the same species.

#### 46. GELECHIA BOSQUELLA, Chamb.

n. syn. = costipunctella, Mschl.

Ecophora basqueella, Chamb. Can. Ent. VII. 92 (1875)<sup>1</sup>. Gelechia basqueella, Chamb. Can. Ent. VII. 124 (1875)<sup>2</sup>. Gelechia? bosquella, Chamb. Bull. U.S. G.G. Surv. IV. 87, 142 (1878)<sup>3</sup>. Gelechia (Bryotropha?) bosquella, Wlsm. Tr. Am. Ent. Soc. X. 178 (1882)<sup>4</sup>. Gelechia costipunctella, Mschl. Ab. Senck. Nat. Ges. XV. 344, 354 (1890)<sup>5</sup>. Gelechia bosquella, Riley, Smith's List Lep. Bor. Am. 100. No. 5329 (1891)<sup>6</sup>. Gelechia costipunctella, Wlsm. Pr. Z. Soc. Lond. 1891, 519, 545 (1892)<sup>7</sup>.

Hab. United States <sup>1-4, 6</sup>. West Indies—Jamaica (Monteague, 1100 ft., XI., Rendall); Portorico <sup>5,7</sup>; St. Croix, 23 IV. (Hedemann); St. Thomas, 10 IV. (Gudmann); Grenada (Balthazar, 250 ft., windward side, 5–10 IV.—H. H. Smith).

Three specimens which cannot be separated from bosquella received from Texas, although like many of the insular forms they are slightly smaller. They also agree well with Möschler's description of costipunctella, and I have little doubt that he had this species before him.

### 47. Gelechia donatella, Wkr.

Gelechia donatella, Wkr. Cat. Lp. Ins. B. M. XXIX. 596-7 (1864)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 519, 545 (1892)<sup>2</sup>.

Hab. West Indies—Jamaica<sup>1,2</sup>.

## 48. Gelechia exclarella, Mschl.

Gelechia exclarella, Mschl. Ab. Senck. Nat. Ges. XV. 343-4, 354 (1890)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 519, 545 (1892)<sup>2</sup>.

Hab. West Indies—Portorico <sup>1, 2</sup>.

## 49. Gelechia biniveipunctata, sp. n.

Antennæ fuscous above, banded with white beneath, the annulations more widely separated towards the apex than on the stem. Palpi: apical joint as long as the second, the latter slightly roughened beneath; whitish, the second joint shaded externally at the base with fuscous, a fuscous spot at its apex; apical joint with two broad fuscous bands. Head and thorax cream-white, laterally shaded with brownish fuscous. Fore wings tawny brown, with two white costal spots, the first small at half the wing-length, the second larger at the commencement of the costal cilia; an ochreous band beginning at the base follows the dorsum to the end of the fold, where it terminates in a slight rounded projection above the fold; its upper edge is indented about the middle by a dark

tawny-brown spot, blending with the ground-colour above it; three shining steel-grey bands can be traced with the lens, the first commencing on the costa at one-fifth and tending obliquely outwards to the fold; the second, commencing at the first costal spot, runs almost straight to the fold, and slightly encroaches on the ochreous band beneath it; the third, slightly preceding the second costal spot at its lower extremity, reaches to the dorsum at the termination of the ochreous band; cilia tawny brown, with an admixture of steel-grey scales. Exp. al. 38; 10 mm. Hind wings steel-grey; cilia yellowish grey. Abdomen brownish grey. Legs pale cinereous; tarsi faintly spotted.

Type,  $\mathcal{S} \supseteq Mus. Wlsm.$ 

Hab. West Indies—Grenada (Balthazar, windward side—H. H. Smith). Three specimens.

#### 50. GELECHIA POSTPALLESCENS, sp. n.

Antennæ brownish fuscous with whitish annulations. Palpi: apical joint as long as the second joint; whitish, with a fuscous spot externally on the basal half of the second joint. Head and thorax creamy ochreous, the latter margined at the sides with brownish fuscous. Fore wings narrow; brownish fuscous, sparsely sprinkled with ochreous scales; a creamy-ochreous dorsal streak occupies one-third the width of the wing and runs from the base through the tornal cilia; a small creamy-ochreous costal spot lies at one-fourth from the apex, and a few pale ochreous scales are visible at the base of the brownish-fuscous terminal cilia. Exp. al. 9 mm. Hind wings and cilia grey. Abdomen brownish grey. Legs whitish ochreous; tarsi minutely spotted with fuscous.

Type, Q Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 15 IV.—H. H. Smith). Unique.

## 51. GELECHIA JAMAICENSIS, sp. n.

Antennæ creamy white, with greyish-fuscous annulations. Palpi: apical joint as long as the second joint, the latter slightly roughened beneath; cream-white, the second joint doubly barred with fuscous externally, the apical joint biannulate with fuscous. Head creamy white. Thorax pale ochreous, whitish anteriorly. Fore wings pale ochreous, with a slight admixture of creamy-white and some ferruginous shading; sprinkled and suffused with greyish fuscous above the fold and along the costa (especially on its outer two-thirds, where it extends to half the width of the wing), presenting a peppered or irrorated appearance; this irroration is continued around the termen and in the base of the greyish cilia; two dark ferruginous-brown ocellated spots before the middle of the wing, the first at the commencement of the outer third of the fold, the other above and very slightly beyond it (in some specimens these spots are hardly noticeable, while in others the upper one is preceded and followed by similar spots). Exp. al. 8 mm.

Hind wings and cilia brownish grey. Abdomen greyish ochreous. Hind legs creamy-whitish, with greyish-fuscous tibial shades and tarsal spots.

Type,  $\Im \Omega$  Mus. Wlsm.

Hab. West Indies—Jamaica (Kingston, VII. 1892—T. D. A. Cockerell). Seven specimens. "So abundant round the lamp in my house during the past week as to amount to a pest, getting into the drinking water, &c.," Ckrll. i. l. 18 VII. 1892.

## 52. Gelechia gudmannella, sp. n.

Antennæ pale brownish cinereous. Palpi whitish cinereous, shaded externally. Head and thorax pale brownish cinereous. Fore wings pale brownish cinereous, sparsely speckled with black; on the cell before the middle is a minute elongate black streaklet, followed by a second in the same line with it at the end of the cell; a small black spot on the fold lies below the first streaklet, and on the costal and apical portion a few slender pale lines are traceable along the veins, but these are very inconspicuous; around the termen and apex minute groups of blackish scales mark the base of the cilia, through the upper portion of which runs a slender dark line, the cilia being otherwise scarcely paler than the ground-colour. Exp. al. 8-10 mm. Hind wings shining greyish; cilia paler, with a slight ochreous tinge; on the costal margin near the base appears a slight thickening of cuticle, with a small brownish-ochreous hair-pencil. Abdomen pale brownish cinereous. Legs whitish cinereous.

Type, & Mus. Wlsm.

Hab. West Indies—San Domingo (Puerto Plata, 16 V.—Gudmann); St. Croix, 27 IV. (Gudmann); St. Thomas, bred from Solanum, 24-25 III. (Gudmann, Hedemann).

15. DIDACTYLOTA, Wlsm.

= § DACTYLOTA, Snell.

53. DIDACTYLOTA BICOLOR, WISM.

Didactylota bicolor, Wlsm. Pr. Z. Soc. Lond. 1891, 522, 546 (1892) 1.

Hab. West Indies—St. Vincent 1.

16. POLYHYMNO, Chamb.

= Copocercia, Z.

54. Polyhymno luteostrigella, Chamb.

= FUSCOSTRIGELLA, Chamb.3

Polyhymno luteostrigella, Chamb. Can. Ent. VI. 247-8 (1874)<sup>1</sup>. Polyhymno fuscostrigella, Chamb. Can. Ent. VIII. 30-1 (1876)<sup>2</sup>. Polyhymno luteostrigella, Chamb. Bull. U.S. G.G. Surv. IV. 161 (1878)<sup>3</sup>: Jr. Cin. Soc. N.H. II. 198, 203, fig. 26 (1880)<sup>4</sup>; Beut.

Ent. Am. V. 37 (1889)<sup>5</sup>; Wlsm. Tr. Ent. Soc. Lond. 1891, 95, 96, Pl. VII. 78 (1891)<sup>6</sup>; Riley, Smith's List Lep. Bor. Am. 104, No. 5586 (1891)<sup>7</sup>.

Hab. UNITED STATES 1-7, VIII. 1 West Indies—Jamaica (Monteague, 1100 ft., XI.—Rendall); St. Thomas, 12 III.—2 IV. (Gudmann, Hedemann).

#### 55. Polyhymno laterestriata, sp. 11.

Antennee white, faintly shaded with greyish ochreous beyond the base. Palpi white. Head white. Thorax greyish; tegulæ white. Fore wings shining silvery white, the extreme apical portion bright orange: a very oblique brownish-grey costal streak, followed by a scarcely less oblique white one, runs through the orange space nearly to a conspicuous white-margined black spot at the apex, and is met by a more slender oblique streak from the dorsum, also followed by a parallel white streak, wider than the one above it, and nearly divided at its middle by a slender dark line reverting from the tornus; cilia on their upper half with a shining bronzy shade at their base and a grey line running through them obliquely downwards from the apex; on their lower half whitish. Exp. al. 10 mm. Hind wings whitish grey; cilia white, a reduplicated dark line running through them across the apex. Abdomen whitish, shaded with grey above, with a series of oblique lateral grey streaklets on either side; anal tuft whitish. Legs white; hind tarsi shaded and spotted with greyish fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Thomas, 30 III.-10 IV. (Hedemann). Two specimens.

## 56. Polyhymno sciurella, sp. n.

Antennæ white. Palpi shining white. Head and thorax shining white. Fore wings shining bluish white, with an elongate bright orange patch preceding the apex and reaching the costa but not the dorsum; this is preceded by a slight greyish shade, which does not extend along its upper edge and is followed by a strong black apical spot; before and below the spot is an ontwardly curved greyish shade, partly enclosing an elongate silver-white oblique streak along the tornus; alternate orange and greyish-fuscous lines diverge downwards from the apex through the upper half of the cilia, which are plain greyish white about the tornus. Exp. al. 8 mm. Hind wings pale blue-grey; cilia whitish grey, with two slender dark lines crossing them at the apex. Abdomen silvery, with a remarkably long and dense pale ochreous anal tuft in the male. Legs: hind tibiæ pale ochreous; tarsi white, the spurs tipped and the tarsi biannulate with greyish fuscous.

Tupe, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 22-24 III. (Gudmann, Hedemann). Three specimens.

#### 57. POLYHYMNO? GODMANI, Wlsm.

Polyhymno? godmani, Wlsm. Pr. Z. Soc. Lond. 1891, 525, 546 (1892)<sup>1</sup>.

Hab. West Indies—SAN DOMINGO (Puerto Plata, 16 V.—Gudmann); ST. VINCENT<sup>1</sup>.

#### 17. Anacampsis, Crt.

= Tachyptilia, Hein., Stgr. & Wk., Meyr., &c.

The type of Anacampsis is Tinea populella, Cl., as specified by Curtis, Br. Ent., expl. Pl. 189 (1827). For many years this generic name has been separated from its type and used for the anthyllidella group, for which there is no justification, and Tachyptilia, Hein., which has usurped the place of the true Anacampsis, Curtis, must sink as its synonym.

### 58. Anacampsis plumbeolata, sp. n.

Antennæ greyish. Palpi very slender, strongly recurved, smooth, the apical joint slightly longer than the second; greyish, with a black spot at their base externally. Head and thorax smooth; leaden grey. Fore wings shining, leaden grey, with five blackish spots—one on each side of the fold near its base, one resting on the middle of the fold, with another immediately above and slightly beyond it, the fifth at the end of the cell; a scarcely perceptible outwardly angulated paler band crosses the wing at one-fourth from the apex, terminating in a white spot at the commencement of the costal cilia, whence a row of blackish spots extends around the apex and termen; cilia pale leaden grey. Exp. al. 10.5 mm. Hind wings broader than the fore wings; brownish grey, cilia the same. Abdomen brownish grey. Legs whitish ochreous.

Type, ♂ Mus. Hedemann.

Hab. West Indies—St. Croix, 4 V. (Hedemann). Unique.

## 59. Anacampsis cornifer, sp. n.

Antennæ greyish ochreous, faintly annulated with fuscous. Palpi slender, curved, the second joint comparatively short, closely clothed; whitish, with a distinct black patch on its outer side covering the basal two-thirds; apical joint slender, naked, twice the length of the second, yellowish white. Head and thorax greyish ochreous. Fore wings greyish ochreous, indistinctly speckled with fuscous, a black dot at the extreme base of the costa, two fuscous dots in the fold, two on the discal cell, a slight fuscous costal shade above the end of the cell, followed by a pale ochreous spot, a few fuscous scales lying around the apex and termen; there is a slight greyish suffusion across the middle of the wing, and beyond it from the pale costal spot a curved band, paler than the ground-colour, is indistinctly traceable across the wing; cilia greyish ochreous. Exp. al. 10-11 mm. Hind wings

brownish grey, with slightly paler cilia. Abdomen and legs brownish grey.

Type, & Mus. Hedemann.

Hab. West Indies—St. Croix, 5-12 V. (Gudmann, Hedemann); St. Thomas, 20 III.-18 1V. (Gudmann, Hedemann). Six specimens.

Bred by Mr. Gudmann at St. Croix from larvæ feeding on

Croton flavens.

In a specimen, which I regard as undoubtedly a variety of this species, the discal and plical dots are not traceable, the wing-surface being merely speckled with fuscous. It appears to be somewhat variable.

#### 60. Anacampsis mangelivora, sp. n.

Antennæ greyish fuscous. Palpi long, recurved, slender, the apical joint much longer than the second; second joint smooth, clothed with closely-appressed black scales nearly to its apex, which is hoary; apical joint hoary, sprinkled with blackish scales. Head and thorax greyish fuscous, with hoary speckling. Fore wings greyish fuscous, with profuse hoary speckling; a dark fuscous elongate spot on the costa before the middle is preceded and followed by some hoary whitish scaling, of which there is also a slight patch at thé commencement of the costal cilia; cilia hoary greyish. Exp. al. 14 mm. Hind wings brownish grey; cilia hoary grey. Abdomen brownish grey. Legs hoary greyish; hind tarsi annulate with dirty whitish.

Type, ♀ Mus. Gudmann.

Hab. West Indies—St. Thomas (bred from Rhizophora mangel,

21 IV.—Gudmann). Unique.

"Raupe zwischen zwei zusammengesponuenen, flach auf einandern liegenden Blättern von Rhizophora; flach, Kopf sehr gross, dunkelbraun. Der Körper gegen das After abnehmend in Breite, Grundfarbe schmutzig grün, mit drei sehr feinen lilafarbenen Rückenlinien; Bauch hellgelb, 16-füssig; nach der letzten Häutung wird sie fleischfarbig, Bauch etwas heller, Kopf dunkelbraun." (Gudmann).

## 61. Anacampsis quinquepunctella, sp. n.

Antennæ cinereous, faintly banded with fuscous. Palpi with the second joint somewhat triangular; dark brownish fuscous externally, white within and along the outer edge at its extremity; apical joint slender, naked, more than twice as long as the second; white. Head and thorax dull fawn-grey. Fore wings dull fawn-grey, with five greyish-fuscous spots; one above and one beneath the fold at one-fourth, one on the fold at its outer third with another on the cell a little above and beyond it and a small one at the end of the cell; half-way between this and the apex is an outwardly angulated, pale cinereous, narrow fascia; a small dark fuscous spot lies at the extreme base of the costa; cilia pale cinereous, darker towards the apex. Exp. al. 10-12 mm. Hind

wings almost concolorous with the fore wings, but with a slight brownish-grey tinge; cilia pale cinereous. Abdomen shining, brownish grey. Legs pale cinereous.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, windward side, 5-15 IV.—H. H. Smith). Three specimens.

#### 62. Anacampsis lapidella, sp. n.

Antennæ stone-grev. Palpi whitish; second joint somewhat triangular, with a brownish-fuscous shade, not reaching to its outer margin, externally; apical joint long, slender, erect. Head and thorax brownish fuscous. Fore wings stone-grey, sprinkled with brownish-fuscous scales, with a series of three brownish-fuscous discal spots; the first diffused downwards across the fold at about one-fifth, the second a little beyond a smaller plical spot beneath it, the third at the end of the cell, of irregular shape and somewhat diffused; above and a little beyond this is a small costal spot preceding an inverted pale cinereous costal streak, which forms the upper extremity of an ill-defined, narrow, pale cinereous fascia crossing the wing nearly parallel with the termen; cilia ochreous, speckled along their base with brownish fuscous and with a line of the same colour running through them around the apex and also along the termen. Exp. al. 13 mm. Hind wings brownish cinereous; cilia somewhat paler, with a reduplicated shade-line running through them. Abdomen brownish cinereous. Hind legs whitish cinereous, shaded externally with brownish fuscous; hind tibiæ densely hairy above.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, windward side, 15 IV.—H. H. Smith). Unique.

## 63. Anacampsis insularis, sp. n.

Antennæ greyish fuscous. Palpi: the second joint with a closely-appressed triangular tuft above; greyish fuscous; apical joint twice as long as the second, with two pale annulations. Head and thorax greyish fuscous. Fore wings greyish fuscous, with dirty whitish costal blotches reaching nearly half across the wing—one elongate, oblique, before the middle; another smaller, not oblique, on the middle; a third before the apex nearly meeting at its lower extremity a smaller one arising from a little beyond the tornus; some dark fuscous spots along the fold are connected by a dark line, and an irregular dark line along the outer part of the cell connects a small median spot with one a little below the apex; cilia bone-whitish, slightly spotted along their base. Exp. al. 8 mm. Hind wings greyish fuscous. Abdomen greyish fuscous. Legs greyish fuscous, spotted with bone-white.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 24 III. (Hedemann); St. Jan, 27 III. (Gudmann). Two specimens.

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#### 64. Anacampsis desectella, Z.

Gelechia (Tachyptilia) desectella, Z. Hor. Soc. Ent. Ross. XIII. 362-3, Pl. V. 122 (1877)<sup>1</sup>. Tachyptilia desectella, Wlsm. Pr. Z. Soc. Lond. 1891, 523, 546 (1892)<sup>2</sup>.

Hab. West Indies—Cuba 1, 2.

#### 18. Acompsia, Hb.

Type, (Tinea) cinerella, Cl. (Dp.).

Acompsia, Hb. Verz. bek. Schm. 409 (1826); Stph. Ill. Br. Ent., Haust. IV. 222-3 (1834); Dp. Hist. Nat. Lp. Fr. XI. 19 (1838) [nec Meyr. HB. Br. Lp. 633-4 (1895)].

= Brachycrossata, Hein. Schm. Deutsch. Tin. 323-4 (1870);

Stgr. & Wk. Cat. 300 (1871).

 $=R_{ECURVARIA}$  (Hw.), Meyr. HB. Br. Lp. 606-7 (1895).

Westwood [Syn. Gu. Br. Ins. 110 (1840)], writing under the heading "Acampsia," cites tinctella, Hb. (214), as the type. Staudinger and Wocke refer Hübner's figure of cinerella (173=†137 Stgr.) to Clerck's species of this name; but it certainly looks more like an Ecophora, and Westwood may have been justified in considering it to be the same species as tinctella, Hb. (214), otherwise tinctella could not be a possible type of Acompsia, not being cited by Hübner. In either case Westwood's specification is inadmissible, being subsequent to Duponchel's citation of cinerella, Cl. (= ardeliella, Hb. 437), as the type of Hübner's genus Acompsia. Haworth's genus Recurvaria was not published until 1828, and Acompsia, Hb. (1826), is therefore entitled to precedence. The fourth part of Haworth's Lp. Br., pp. 513-609, is usually considered to have been published in 1829, but the completed work is reviewed, Mag. N. H. I. 348-9 (September 1828).

Brachyerossata, Hein., must of course sink as a synonym whichever name is used for this genus; and there appears to be no justification for Meyrick's use of Acompsia for the Ecophora of Staudinger and Wocke's Catalog (HB. Br. Lp. 633-4), nor for the employment of Recurvaria, Hw. (in lieu of Acompsia, Hb.),

for Brachycrossata, Hein.

## 65. Acompsia angulifera, sp. n.

Antennæ greyish cinereous. Palpi smooth, slender, recurved; hoary grey, with a minute dark spot above near the apex. Head and thorax hoary greyish. Fore wings hoary greyish, with slight greyish-fuscous speckled shading; at the base of the costa is a small elougate blackish spot; on the fold at one-fourth from the base is a blackish transverse spot, followed by a smaller length-spot in the fold; at the middle of the costa is an outwardly oblique greyish fuscous shade, mixed with some chestnut scales, terminating in a slender curved line on the outer end of the cell; before the apex is a slender hoary whitish transverse fascia, slightly angulated outwards on the middle and preceded by a greyish-fuscous shade

mixed with some chestnut; the pale fascia is connected at each extremity with an internally dark margined pale line which passes around the base of the cilia, interrupted only at the extreme apex and forming a triangular pattern; a reduplicated slender fuscous and chestnut line runs through the hoary cilia along the termen. Exp. al. 9 mm. Hind wings and cilia leaden grey. Abdomen greyish. Legs hoary, speckled with greyish fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 7 V.-11 V. (Gudmann, Hedemann); Grenada (Balthazar, windward side, 5-27 IV.—H. H. Smith). Eight specimens.

Bred by Mr. Gudmann from a plant which was not identified.

### 66. Acompsia psoricopterella, Wlsm.

Brachycrossata psoricopterella, Wlsm. Pr. Z. Soc. Lond. 1891, 523-4, 546 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

#### 19. Helcystogramma, Z.

=Brachycrossata (Hein.), Sect. B, Wlsm. Tr. Ent. Soc. Lond. 1891, 98-9.

#### 67. Helcystogramma obseratella, Z.

Gelechia (Helcystogramma) obseratella, Z. Hor. Soc. Ent. Ross. XIII. 371–3, Pl. V. 127 (1877)<sup>1</sup>. Helcystogramma obseratella, Wlsm. Pr. Z. Soc. Lond. 1891, 523, 546 (1892)<sup>2</sup>.

Hab. West Indies—Cuba 1, 2.

#### 20. TRICHOTAPHE, Clem.

## 68. TRICHOTAPHE TRIGONELLA, Wlsm.

*Trichotaphe trigonella*; Wlsm. Pr. Z. Soc. Lond. 1891, 523, 546 (1892) <sup>1</sup>.

Hab. West Indies—S. Croix, 15 V. (Gudmann); St. Vincent<sup>1</sup>. Bred by Mr. Gudmann, but the food-plant not determined.

## 69. TRICHOTAPHE TEGULELLA, sp. n.

Antennæ whitish ochreous, annulated with umber-brown. Palpi much flattened laterally, smooth, second joint with closely appressed clothing; umber-brown, on their inner side brownish ochreous. Head and thorax pale umber-brown; tegulæ conspicuously pale ochreous. Fore wings dark purplish fuscous, with an elongate blackish spot on the outer third of the fold, separating the dark upper portion of the wing from the narrow dorsal portion, which, below and beyond the fold, is throughout pale ochreous; a small white spot lies at the end of the cell and a larger white costal spot before the apex, this is connected with the tornus by a narrow broken line of ochreous scales; along the termen is a narrow blackish band preceded by a curved line of

white dots parallel with the margin and followed by the purplish-grey cilia. Exp. al. 14 mm. Hind wings greyish brown; cilia grey, with a dark dividing shade near the base. Abdomen greyish brown. Legs greyish brown, faintly spotted with whitish ochreous, paler on their inner sides throughout.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, windward side, 15 III.-10 IV.—H. H. Smith). Three specimens.

### 21. Malacotricha, Z.

#### 70. MALACOTRICHA ZINGARELLA, sp. n.

Antennæ nearly as long as the fore wing; greyish. Palpi rather long, slender, curved; the second joint with long hair-like scales above; white. Head subochreous above, face white. Thorax subochreous. Fore wings narrow, elongate, the costa depressed about the middle, apex somewhat rounded, termen very oblique; ochreous, mottled with brick-red and streaked with steel-blue, with three black dots along the termen; cilia steel-grey. (It is difficult to describe the exact distribution of the colours, the brick-red occurring between the ochreous spaces, also between some steel-blue lines that mark the course of the apical nervules and along the terminal margin separating the three black dots from the cilia; the steel-blue is especially noticeable about the costal portion of the wing, where it runs in slender lines through the brick-red and ochreous spaces.) Exp. al. 9 mm. Hind wings and cilia pale grey. Abdomen subochreous. Legs whitish.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 1 V. (Gudmann); St. Thomas, 11-21 III. (Hedemann). Four specimens.

"The larva mines in the fleshy leaves of Coccoloba uvifera. Mr. Gudmann has bred this species in numbers" (Hedemann).

"Raupe 16-füssig, nach hinten zu stark zugespitzt, gelbgrün mit durchscheinenden Darmkanal, zwischen den Segmenten stark eingeschnürt. Kopf braun, rund, kann bis zur Hälfte in die Haut des ersten Segments eingezogen werden; Afterklappe mit dunklem Schild von der Farbe des Kopfes.

"Die Minen sassen meistens nur am Rande des Blattes und öfters sehr viele in demselben Blatte. Verpuppung in der Mine."

(Gudmann.)

## 22. Drepanoterma, g. n.

 $(\delta \rho \epsilon \pi \tilde{\alpha} \nu \sigma \nu = a \text{ scimitar}; \tau \epsilon \rho \mu \alpha = an \text{ end.})$ 

Type, Drepanoterma lacticaudellum, Wlsm.

Antennæ as long as the fore wings, biciliate (1).

Labial palpi recurved, long, smooth, flattened, divergent; apical joint scarcely half the length of the second.

Maxillary palpi very short.

Haustellum long.

Head with appressed scales,

Thorax smooth.

Fore wings narrow, elongate, of approximately even width throughout, somewhat securiform, apex slightly uncate, termen oblique, tornus angular. Neuration: 11 veins (7 and 8 coincident), 2 and 3 stalked.

Hind wings trapezoidal, slightly broader than the fore wings, dorsum sinuate, tornus obtusely angular, not incised beneath the apex, costa straight, abdominal angle developed. Neuration: 8 veins, 6 and 7 connate, 3 and 4 from a short stalk, 5 approximated to 3+4.

Abdomen somewhat flattened, anal tuft rather strongly developed.

Legs: hind tibiæ somewhat roughly (but not thickly) clothed. Allied to Strobisia, Clem., but easily separated by the length of the antennæ, the shape of the termen, and the longer palpi.

#### 71. DREPANOTERMA LACTICAUDELLUM, sp. n.

Antennæ dark fuscous, very faintly annulated; basal joint whitish beneath. Palpi bronzy brown, apical joint tipped with white. Head and thorax dark purplish. Fore wings shining ferruginous, the basal third transversely blotched and striated with dark purplish fuscous and dark ferruginous, the apex and termen also shaded with dark purplish fuscous and illuminated with steel-grey patches; cilia whitish ochreous, with dark grey streaks running through them (to the number of five or six), at the tornus purplish fuscous. Exp. al. 12 mm. Hind wings dark coppery grey with iridescent reflections at the base of the cell; cilia coppery grey. Abdomen dark purplish fuscous, anal tuft conspicuous, whitish ochreous. Legs shining creamy whitish, tarsi and tibiæ shaded with greyish.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Chantilly Estate, 350 ft., windward side, 13 IV.—H. H. Smith). One specimen taken on the banks of a stream.

## 23. MENESTA, Clem.

## 72. Menesta? cinereocervina, Wlsm.

Gelechia cinereocervina, Wlsm. Pr. Z. Soc. Lond. 1891, 519–20, 545 (1892)<sup>1</sup>.

Hab. West Indies—St. Vincent 1.

The neuration of the fore wings of this species as recorded (l. c. 519) is erroneous. I find on a re-examination of the two original specimens that they have only eleven veins, not twelve, and therefore wish to amend my original description as follows:—

Fore wings with 11 veins (7 and 8 coincident), 7+8 approxi-

mated to 9, running to the costa.

With this correction Gelechia cinereocervina differs from Menesta tortriciformella, Clem., in having 6 and 7 of the hind wings connate instead of stalked, and in not having biciliate antennæ; but for the moment I am unwilling to separate them generically.

#### 24. YPSOLOPHUS, F.

[It is doubtful whether this generic name is rightly employed, but not having concluded the study of its history I have adopted it in the sense in which it is used by Heinemann, Staudinger and Wocke, &c.]

#### 73. YPSOLOPHUS MANELLUS, Mschl.

Ypsolophus manellus, Mschl. Ab. Senck. Nat. Ges. XV. 344-5, 354 (1890)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 525, 546 (1892)<sup>2</sup>. Hab. West Indies—Portorico<sup>1,2</sup>.

#### 74. YPSOLOPHUS RUSTICUS, Wlsm.

*Ypsolophus rusticus*, Wlsm. Pr. Z. Soc. Lond. 1891, 525-6, 546 (1892) <sup>1</sup>.

Hab. United States—Texas 1, 13 VI. West Indies—St. Vincent 1; Grenada (Mount Gay Estate, 300 ft., leeward side, 25 VIII.—10 IX.—H. H. Smith).

#### 75. YPSOLOPHUS PIPERATUS, WISM.

Ypsolophus piperatus, Wlsm. Pr. Z. Soc. Lond. 1891, 526, 546 (1892)  $^{\mbox{\tiny l}}.$ 

Hab. West Indies—S. Thomas, 31 III.-9 IV. (Gudmann, Hedemann); St. Vincent<sup>1</sup>.

"Larva mining in the leaves of a Solanea" (Hedemann). "On a papilionaceous plant with pink cluster-flowers" (Gudmann).

## 76. YPSOLOPHUS INDIGNUS, Wlsm.

*Ypsolophus indignus*, Wlsm. Pr. Z. Soc. Lond. 1891, 526-7, 546 (1892)<sup>1</sup>.

Hab. West Indies—St. Croix, 4 V. (Hedemann); St. Thomas, 10 III. (Gudmann); St. Vincent<sup>1</sup>; Grenada (Balthazar, 250 ft., windward side, 5-30 IV.—H. H. Smith).

## 77. YPSOLOPHUS JUVENTELLUS, sp. n.

Antennæ ochreous, delicately annulated with umber-brown. Palpi white on their inner sides, the triangularly-tufted second joint umber-brown externally to two-thirds of its length. Head and thorax whitish ochreous. Fore wings umber-brown, with a broad whitish-ochreous band extending from the base to the termen along the dorsal half of the wing, its upper edge indented at and beyond the middle by two slight projections of the darker ground-colour; three umber-brown spots on the termen above the tornus are followed by the whitish-ochreous cilia, through which runs an evenly curved line of umber-brown, giving the apex a rounded appearance; a small oblique white dot lies on the costa before the apex, the dorsum is slightly shaded with umber-brown. Exp. al. 9 mm. Hind wings and cilia bluish grey. Abdomen grey. Legs

whitish ochreous, shaded and banded on the tarsi with umber-brown.

Type, & Mns. Wlsm.

Hab. West Indies-Jamaica (Monteague, 1100 ft., XI.--Rendall). Unique.

### 78. YPSOLOPHUS? STRATELLUS, sp. n.

Antennæ biserrate towards the apex; fuscous, annulate with pale cinereous, basal and adjacent joints brownish ochreous. Palpi (missing). Head cinereous. Thorax leaden grey above, brownish ochreous at the sides, with two lateral ferruginous spots posteriorly. Fore wings brownish ochreous on the costal half, the dorsal half dark ferruginous blending to tawny fuscons; on the pale costal half the ground-colour blends and varies with many different tints, a shining leaden-grey suffusion along its lower edge reaching nearly to the apex is repeated near the base of the costa—the costa itself (especially on its outer half) becoming pale rusty brown rather than brownish ochreous; the dark dorsal half also varies in tone and colour, its upper edge (which although nearly straight is slightly indented a little beyond the middle) is rich reddish ferruginous throughout, blending to dark tawny fuscous along the dorsum and becoming even darker towards the termen and tornus; a leaden-grey line around the apex and termen is followed by the parti-coloured cilia, which are dark tawny grey on their dorsal half with three pale ochreous spots along their base and pale brownish ochreous on their costal half with rusty-brown spots near their base. Exp. al. 16 mm. Hind wings dark tawny grey, semitransparent with bluish reflections towards the base; cilia subiridescent bluish, or brownish grey. Abdomen bronzy grey. Legs brownish grey, with an æneous tinge externally.

Type, ♀ Mus. Wlsm.

Hab. West Indies—Trinidad (F. W. Urich). Unique.

The palpi are unfortunately missing in the type, but I have little doubt that it is a true *Ypsolophus* allied to *flavivittellus*, Clem., with which it agrees in neuration and general appearance.

## 25. Lathontogenus, g. n.

 $(\lambda a \theta \omega \nu = \text{unknown}; \gamma \epsilon \nu o s = \text{genus.})$ 

Type, Lathontogenus adustipennis, Wlsm.

Antennæ 3, uniserrate.

Labial palpi recurved, divergent; apical joint less than half as long as the second, acute; second joint laterally compressed, smooth beneath, clothed on the upper side towards its apex with a somewhat triangular tuft, which does not extend to the basal half.

Maxillary palpi distinct. Haustellum rather short. Ocelli obsolete. Head and thorax smooth.

Fore wings narrow, elongate, apex not depressed, termen oblique and evenly rounded, not sinuate beneath apex, tornus not apparent. Neuration: 11 veins (2 and 3 coincident); 7 and 8 stalked out of 6, 7 to costa slightly before apex; 4 approximated to 2+3; 1 furcate at base.

Hind wings as broad as the fore wings; costa sinuate from before middle, clothed almost from the base with cilia of even length; strongly and angularly excavate beneath the produced apex, tornus rounded, dorsum straight, abdominal angle developed. Neuration: 8 veins; 3 and 4 connate or stalked, 5 approximated to 6, 6 and 7 somewhat approximated.

Legs: hind tibiæ with long hairs above and shorter ones beneath. Allied to Mesophleps, Hb., but differing in neuration and in the structure of the palpi. I have been unable to refer this form to

any of the genera proposed by Chambers.

### 79. LATHONTOGENUS ADUSTIPENNIS, sp. n.

Antennæ whitish ochreous, faintly annulated. Palpi whitish ochreous, the second joint reddish brown externally except the outer end of the fringe on its upper side. Head and thorax whitish ochreous. Fore wings whitish ochreous at the base and a little way along the costa (with the exception of a narrow fawn-brown line along the extreme margin from the base), blending into pale fawn-ochreous over the remaining wing-surface; an umber-brown shade extending from before the middle of the costa to the apex; three faint fawn-grey spots are visible, the first on the middle of the fold, the third at the end of the cell, and the second equidistant between them on the cell; cilia fawn-ochreous. Exp. al. 10-18 mm. Hind wings and cilia grey. Abdomen pale fawn-ochreous. Legs pale fawn-ochreous, tarsal joints transversely shaded.

Type,  $3 \$  Mus. Wlsm.

Hab. West Indies—St. Croix, 27 IV.-5 V. (Gudmann, Hedemann); St. Thomas, 11-19 III. (Gudmann, Hedemann); Grenada (windward side, Balthazar, 250 ft., 15-27 IV.; leeward side, Mount Gay Estate, 300 ft., 25-30 VIII.—H. H. Smith).

The specimens from St. Thomas and St. Croix are uniformly smaller (10-13 mm.) than those from Grenada (14-18 mm.); but

I consider them to be the same species.

#### III. ŒCOPHORIDÆ.

26. Етнміл, Нь.

Type, Tinea aurifluella, Hb. (=\*pyrausta, Hb.).

Етиміа, Hb. Verz. bek. Schm. 163 (1822?).

n. syn. =  $P_{SECADIA}$ , Hb. (1826); =  $A_{NESYCHIA}$ , Hb. (1826); =  $D_{ISTHYMNIA}$ , Hb. (1826); =  $M_{ELANOLEUCA}$ , Stph. (1829);

=  $\mathcal{E}_{DIA}$ , Dp. (1836); =  $C_{HALYBE}$ , Dp. (1836); =  $A_{ZINIS}$ , Wkr. (1863).

80. Ethmia confusella, Wkr.

=STRIGOSELLA, Wkr.<sup>5</sup>; n. syn.=INGRICELLA, Mschl.

Hyponomeuta confusellus, Wkr. Cat. Lp. Ins. B. M. XXVIII. 531 (1863)<sup>1</sup>. Cryptolechia strigosella, Wkr. Cat. Lp. Ius. B. M. XXIX. 710 (1864)<sup>2</sup>. Psecadia ingricella, Mschl. Ab. Senck. Nat. Ges. XV. 343, 354, (Pl.) fig. 19 (1890)<sup>3</sup>. Psecadia (Cryptolechia) strigosa, Ckrl. Jr. Inst. Jamaica, I. 33 (1891)<sup>4</sup>. Psecadia confusella, Wlsm. Pr. Z. Soc. Lond. 1891, 527, 546 (1892)<sup>5</sup>. Psecadia ingricella, Wlsm. Pr. Z. Soc. Lond. 1891, 527, 546 (1892)<sup>6</sup>.

Hab. West Indies—Cuba (Tring Mus.): Jamaica 4,5,6, 19-21 VII.; Hayti (Port-au-Prince, excl. 6 VI.—Gudmann); San Domingo 1,2,5; Portorico 3,6; St. Croix, 6 V. (Gudmann); Dominica 5; Grenada (windward side, Balthazar, 250 ft. 5-30 IV.; leeward side, Mount Gay Estate, 300 ft., 1-5 X.—H. H. Smith). Colombia—Bogota 5.

#### 81. Ethmia subsimilis, sp. n.

Antennæ stout; dull greyish cinereous. Palpi smooth, recurved to the vertex, the apical joint shorter than the second; dirty whitish, with a greyish spot externally near the end of each joint. Head and thorax smoky whitish. Fore wings smoky whitish, with greyish-fuscous spots; a broken greyish-fuscous shade extends from near the base to beyond the middle of the costa, a series of spots and shades of a similar colour extending from before the middle of the costa to the dorsum beyond its middle in an outwardly curved and broken line; between this and the base are about ten greyish-fuscous spots irregularly scattered along and below the fold, two near the base on either side of the fold being somewhat darker than the others; beyond the fasciaform central shade are several ill-defined greyish-fuscous markings above and below the outer end of the cell, followed by a marginal series of about six rather darker spots not extending along the base of the costal cilia; a greyish-fuscous shade runs along the middle of the smoky-whitish cilia. Exp. al. Hind wings pale stone-grey, somewhat darkened towards their outer extremities; cilia smoky whitish. Abdomen stonegrey. Hind tibice smoky whitish, somewhat speckled and shaded.

Type, & Mus. Wlsm.

Hab. West Indies-Jamaica, 17 VII. (Cockerell). Unique.

This species differs from Ethmia confusella, Wkr., in the shape of the fore wings, which are somewhat squarer at the apex; the series of marginal dots do not revert along the costa as in that species, and, moreover, the spots and shades, although of the same colour, are not conspicuously arranged longitudinally, which is one of the marked features of the numerous forms of that insect. In size it is, perhaps, even smaller than ingricella, Mschl., which I am compelled to regard as a small form of Walker's species.

## 82. ETHMIA JOVIELLA, sp. n.

Antennæ brownish cinereous. Palpi white, slightly dusky at the extreme apex. Head and thorax white; tegulæ with a black spot anteriorly. Fore wings white, with a slight brownish-cinereous shade along the costal portion; a large quadrate blackish spot at the base of the costal extends narrowly along the extreme margin to a black spot at one-sixth from the base; a second black spot lies a little before the middle of the wing at the upper edge of the cell, and there are three black spots below the fold, one at about one sixth, one at about one-half, and one below these two nearer to the first than to the second; just above the outer end of the fold opposite the tornus is another spot, less black, more inclining to fuscous; cilia white. Exp. al. 14 mm. Hind wings greyish brown; cilia white. Abdomen greyish brown, shaded with ochreous above at the base; anal tuft inclining to ochreous. Legs whitish, tarsi faintly mottled.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Mount Gay Estate, 300 ft., leeward side, 1-5 X.—H. H. Smith). Unique.

## 83. ETHMIA PAUCELLA, Wkr.

Hyponomeuta paucellus, Wkr. Cat. Lp. Ins. B.M. XXVIII. 530-1 (1863)<sup>1</sup>. Psecadia paucella, Wlsm. Pr. Z. Soc. Lond. 1891, 527, 546 (1892)<sup>2</sup>.

Hub. West Indies—San Domingo 1,2.

## 84. ETHMIA NOTATELLA, Wkr.

# = XANTHORRHOA, Z.5

Psecadia notatella, Wkr. Cat. Lp. Ins. B.M. XXVIII. 536 (1863)<sup>1</sup>. Psecadia xanthorrhoa, Z. Hor. Soc. Ent. Ross. XIII. 234–6, Pl. III. 71 (1877)<sup>2</sup>; Btl. Ent. Mo. Mag. XIX. 107 (1882)<sup>3</sup>; Snell. Tijd. v. Ent. XXX. 65 (1887)<sup>4</sup>; Mschl. Ab. Senck. Nat. Ges. XV. 341, 354 (1890)<sup>5</sup>. Psecadia notatella, Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892)<sup>6</sup>.

Hab. West Indies — San Domingo 1,6; Portorico 2,5,6; Curação 4,6.

85. ETHMIA ABRAXASELLA, Wkr.

# = AUREOAPICELLA, Mschl.3

Psecadia abraxasella, Wkr. Cat. Lp. Ins. B.M. XXX. 1016-7 (1864)<sup>1</sup>. Psecadia aureoapicella, Mschl. Ab. Senck. Nat. Ges. XV. 341-2, 354 (1890)<sup>2</sup>. Psecadia abraxasella, Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892)<sup>3</sup>.

Hab. West Indies—Cuba (Tring Mus.); Jamaica 3, 17 VII.; San Domingo 1,3; Portorico 2,3.

# S6. ETHMIA EXORNATA, Z.

Psecadia exornata, Z. Hor. Soc. Ent. Ross. XIII. 238-40, Pl. III. 73 (1877)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892)<sup>2</sup>.

Hab. West Indies—Cuba 1,2. Peru—Chanchamayo 1,2.

## 87. ETHMIA GELIDELLA, Wkr.

Tamarrha gelidella, Wkr. Cat. Lp. Ins. B.M. XXIX. 817 (1864)<sup>1</sup>. Psecadia gelidella, Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892)<sup>2</sup>.

Hab. West Indies—Jamaica 1,2.

## 88. ETHMIA KIRBYI, Mschl.

Psecadia kirbyi, Mschl. Ab. Senck. Nat. Ges. XV. 342-3, 354 (1890) ; Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892) <sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

#### IV. BLASTOBASIDÆ.

## 27. Blastobasis, Z.

Type, Ecophora (Scythris) phycidella, Z.

Blastobasis, Z. Lin. Ent. X. 171 (1855); Hein. Schm. Deutsch. Tin. 387 (1870).

Zeller separated phycidella, Z., and roscidella, Z., from Butalis under the name Blastobasis, but giving only a brief indication of its characters. Heinemann constituted phycidella the type, and described the genus in detail, but with hardly sufficient precision for comparison with other genera now known to occur. It may be well to indicate the characters peculiar to the genus Blastobasis, remarking that those species which have been placed in it in the North American lists do not conform in neuration.

Antennæ:  $\sigma$  with pecten, strongly notched beyond the basal joint, uniciliate  $\frac{1}{3}$ .

Labial palpi recurved, of approximately equal thickness throughout, second joint scarcely longer than the apical.

Maxillary palpi short, projecting. Haustellum long, well developed.

Head and thorax smooth.

Fore wings elongate, lanceolate, somewhat widened at the base, acutely pointed. Neuration: 12 veins, 7 and 8 stalked, 7 to costa.

Hind wings with abdominal angle strongly developed, thence evenly tapering to the subacute apex, costa much straighter than dorsum. Neuration: 7 veins (4 absent); 5 and 3 stalked (sometimes connate).

Abdomen somewhat flattened. Legs: hind tibiæ hairy above.

# 89. Blastobasis argillacea, sp. n.

Antennæ fawn-grey (a pecten on the basal joint beneath). Palpi smooth, evenly curved; fawn-grey. Head fawn-grey. Thoraæ fawn-grey, with a slight brownish tinge. Fore wings fawn-grey, with a brownish suffusion and some greyish-fuscous mottling around the apex and apical margin, a small blackish spot on the cell a little before and above the middle of the wing, from which

an ashy zigzag shade runs to the dorsal margin in the form of the letter Z; two similar spots lie at the end of the cell, the upper one in the same line as the first, the lower one a little beyond and below it; cilia dust-grey. Exp. al. 14 mm. Hind wings pale brownish grey; cilia with a slight ochreous tinge. Abdomen brownish grey, the anal tuft ochreous. Legs cinereous.

Type, ♀ Mus. Wlsm.

Hab. West Indies—St. Croix, 7 V. (Gudmann); St. Thomas,

15 III.-12 V. (Gudmann, Hedemann). Five specimens.

Bred by Baron von Hedemann from larvæ feeding in the flowers of a Bisonia. All the specimens are females, but I have little doubt that the reception of the male will prove that they are referred rightly to this genus.

## 90. Blastobasis grenadensis, sp. n.

Antennæ pale cinereous. Palpi pale cinereous, shaded externally with fuscous. Head and thorax greyish, with a slight ochreous tinge. Fore wings smoky greyish, paler at the base, the darker shading inclining to form longitudinal lines on the outer half of the wing; with the usual three spots dark fuscous, the first a little above and before the middle, the two outer corresponding to the apical and tornal angles of the cell; cilia at tornus inclining to ochreous, about apex darker. Exp. al. of 12; \$\Q22 \text{ mm.} \text{Hind} wings greyish, with a slight bronzy sheen; cilia inclining to ochreous. Abdomen greyish fuscous; anal tuft paler. Legs greyish fuscous, the long hairs on the hind tibiæ inclining to ochreous.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—Dominica (Druce); Grenada (Balthazar, 250 ft., windward side, 5 IV.-4 V.; Mount Gay Estate, 300 ft., leeward side, 25-30 VIII.; 1-5 X.—H. H. Smith). Five specimens.

The specimen from Dominica is not in good condition, but it

appears to belong to this species.

# 91. Blastobasis subolivacea, sp. n.

Antennæ pale cinereous. Palpi cinereous, shaded with fuscous externally. Head and thorax cinereous, the latter slightly shaded with fuscous. Fore wings olive-grey with a slight greenish tinge, especially on the basal half, shading to brownish externally; a single black dot before and above the middle is followed by the usual two, the one at the apex and the other at the tornus of cell; costa narrowly inclining to ochreous; cilia greyish, with a slight ochreous tinge at tornus. Exp. al. 12 mm. Hind wings bronzy brownish, thinly scaled between the upper veins in the 3, and causing the veins to appear darker, thus giving the wings a streaked appearance; cilia pale greyish ochreous. Abdomen brownish grey; anal tuft paler. Legs cinereous; hind tarsi faintly grey-spotted.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 7 III.-9 IV. (Gudmann, Hedemann). Two specimens.

## 92. Blastobasis triangularis, sp. n.

Antennæ pale fawn-ochreous. Palpi dark fuscous, the tips of the joints paler. Head cinereous; face slightly ochreous. Thorax dusky cinereous. Fore wings dusky cinereous; the costa narrowly subochreous throughout, the usual three spots almost obscured by the dusky ground-colour, but traceable in the ordinary positions—the first before and slightly above the middle, the other two corresponding to the apical and tornal angles of the cell (there is a slight sprinkling of scattered subochreous scales over the wing-surface in a bred specimen); cilia cinereous, with a slight ochreous tinge. Exp. al. 10-12 mm. Hind wings thinly scaled between the upper veins in the 3; brownish fuscous, with a faint purplish gloss; cilia inclining to ochreous. Abdomen brownish fuscous; anal tuft ochreous. Legs cinereous; hind tarsal joints inclining to ochreous.

Type, ♂ Mus. Hedemann; ♀ Mus. Gudmann.

Hab. West Indies—St. Thomas, 11 III.-15 IV. (Gudmann, Hedemann). Two specimens.

Bred by Baron von Hedemann from a black larva feeding on a

low plant which was not identified.

The Q has the hind wings much paler and less marked, and of a greyer tinge; the anal tuft is ochreous, as in the d.

## 93. Blastobasis gracilis, sp. n.

Antennæ and palpi bone-colour, the latter slightly shaded externally. Head and thorax bone-colour. Fore wings bone-colour, with a slight vinous tinge, sparsely sprinkled and mottled with pale brownish fuscous; the usual three dots are fairly conspicuous, but the first of these, scarcely before the middle, is preceded by a slight indication of another spot immediately above the middle of the fold; the termen shows a very faint indication of a broken fuscous line; cilia bone-grey. Exp. al. 11 mm. Hind wings shining pale bone-grey; cilia with a slight vinous gloss. Abdomen bone-grey; anal tuft bone-colour. Legs pale cinereous; hind tibiæ slightly shaded externally.

Type, of Q Mus. Wlsm.

Hab. West Indies.—Grenada (Balthazar, 250 ft., windward side, 5-27 IV.—H. H. Smith). Four specimens.

# 28. PIGRITIA, Clem.

# 94. PIGRITIA? BIATOMELLA, sp. n.

Antennæ stoutish, greyish ochreous, the basal joint with a thick tuft of mixed black and ochreous scales beneath. Palpi fuscous, sometimes ochreous at the junction of the second and terminal joints, internally pale ochreous. Head ochreous, much mixed with black. Fore wings smoky at the base, pale greyish ochreous beyond, more or less suffused with fuscous, with a small black dot at the end of the cell, a second near the dorsum immediately below it; cilia pale greyish. Exp. al. 9 mm. Hind wings and cilia pale

greyish. Abdomen greyish; anal tuft pale ochreous. Legs pale ochreous.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 15 III.-14 IV. (Gudmann, Hedemann). Eight specimens.

## 95. PIGRITIA MEDIOCRIS, sp. n.

Antennæ greyish, with a pecten at the base in the 3. Palpi very slender, recurved, greyish, with whitish lines along them above and beneath. Head grey. Thorax and fore wings olivaceous ochreous, the latter with a few greyish-fuscous scales sprinkled over the dorsum and the outer end of the cell; with a narrow line of the same immediately below the costa reaching from the base to half the wing-length, a line of similar scales runs along the termen, sprinkling the paler cilia; with a small dot before the anal angle. Exp. al. 8 mm. Hind wings and cilia pale grey. Abdomen pale olivaceous ochreous, tending to greyish posteriorly. Legs cinereous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 26 IV.-6 V. (Hedemann); St. Thomas, 12 III. (Gudmann). Six specimens.

## 29. Auximobasis, Wlsm.

## 96. Auximobasis insularis, sp. n.

Antennee greyish; the basal joint with a closely-packed shield of scales. Palpi porrect, scarcely recurved, greyish fuscous externally, an ashy ring around the end of the second joint. Head ashy grey. Thorax greyish fuscous; the tegulæ paler. Fore wings pale greyish fuscous, with an angular spot at the base of the costa, ochreous edged with dark fuscous; before the middle of the wing is an outwardly angulated dark fuscous band, and beyond the middle, at about one-third from the apex, a line of dark fuscous mottlings, forming a second band much less conspicuous than the first; cilia ashy grey. Exp. al. 12 mm. Hind wings pale grey; cilia with a slight ochreous tinge. Abdomen and legs ashy grey; anal tuft ochreous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 18 V. (Pontoppidan); St.

THOMAS, 6 III.-15 IV. (Gudmann, Hedemann).

This species differs from variolata, Wlsm., in the less attenuated form of the hind wings, which have also a more obtuse apex.

# 97. Auximobasis variolata, sp. n.

Antennæ with a distinct basal pecten; cinereous. Palpi on the outer sides brownish, with a pale band around the junction of the second and apical joints. Head ashy grey. Thorax pale brownish. Fore wings ashy grey, with pale brownish mottlings and dark fuscous spots and speckles, these latter consist of two ill-defined

spots, one on each side of the fold before its middle, the upper one further removed from the base than the lower; a larger ill-defined spot on the middle of the dorsum, with a smaller one on the costa a little before it, between these a black dot on the cell, followed by some black speckling and two smaller parallel black dots at the end of the cell; cilia ashy grey. Exp. al. 11-15 mm. Hind wings pale grey; cilia with a slight brownish tinge. Abdomen grey. Legs cinereous, banded at the sides with greyish fuscous.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—St. Croix, 8 VI. (Pontoppidan); St. Thomas, 11 III.-18 IV. (Gudmann, Hedemann). Twelve specimens.

This species differs from *insularis*, Wlsm., in the more acute and attenuated apex of the hind wings.

## 98. Auximobasis persimilella, Wlsm.

Auximobasis persimilella, Wlsm. Pr. Z. Soc. Lond. 1891, 534-5, 547, Pl. XLI. 9 a-c (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

## 99. Auximobasis brevipalpella, sp. n.

Antennee cinereous, basal joint hoary. Palpi cinereous, stained with fuscous externally, except at the tips of the second and apical joints. Head and thorax hoary grev. Fore wings hoary grey, sprinkled with fuscous scales; an ill-defined pale fuscous band, slightly before the middle of the wing, is angulated outwardly on the fold and is diffused outwards, leaving the basal portion somewhat paler than the apical; the usual pair of fuscous dots are adjacent to the end of the cell (the first dot usual in these genera is not visible in all specimens); a slight broken fuscous shade follows the margin of the wing around the apex and base of the hoary speckled cilia. Exp. al. 12-13 mm. Hind wings shining brownish grey; cilia scarcely paler. Abdomen brownish grey. Legs: hind tibiæ and tarsi cinereous, shaded externally with faint bands of fuscous.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—Grenada (Mount Gay Estate, 300 ft., leeward side, 25-30 VIII.; 1-5 X.—H. H. Smith). Four specimens. Scarcely distinguishable from persimilella, Wlsm., except by the slightly broader wings and by the distinctly shorter palpi.

# 100. Auximobasis flaviciliata, sp. n.

Antennæ dirty whitish, the basal joint enlarged with a strong pecten. Palpi smooth, erect, the apical joint nearly as long as the second; hoary whitish. Head and thorax smooth; hoary whitish. Fore wings hoary white, minutely grey-speckled, without markings; cilia pale yellowish. Exp. al. 12 mm. Hind wings very pale

grey, with pale yellowish cilia. Abdomen yellowish grey. Legs whitish.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 21-23 III. (Gudmann, Hedemann). Two specimens.

## 101. Auximobasis constans, sp. n.

Antennæ smoky cinereous. Palpi: apical joint scarcely more than half as long as the second joint; hoary cinereous on their inner sides, with a smoky shade externally, except at the apex of the apical and second joints. Head and thorax griseous. Fore wings whitish, with minute smoky speckling; the costa near the base and along the middle with a smoky shade, which also somewhat suffuses the cilia to the apex; the usual three dots are small but clearly defined, the first before and slightly above the middle, the two outer corresponding to the apical and tornal angles of the cell; a series of less clearly defined dark smoky spots on the margin on either side of the apex defining the outline of the cilia; cilia with a slight ochreous tinge about the tornus. Exp. al. 10–12 mm. Hind wings shining yellowish grey; cilia also slightly tinged with ochreous. Abdomen greyish cinereous. Legs pale cinereous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Thomas, 9-27 III. (Gudmann, Hedemann). Three specimens.

# 30. Ισονισμα, g. n. (εἰκόνισμα=α copy.)

# Type, Iconisma macrocera, Wlsm.

Antennæ with strong pecten, without a notch in  $\delta$ , fully as long as the fore wings, narrowed immediately beyond the basal joint and somewhat flattened and tæniaform beyond it.

Maxillary palpi short.

Labial palpi slender, projecting, apical joint slightly shorter than the second.

Head and thorax smooth.

Fore wings elongate-lanceolate, narrow at the base, somewhat acute. Neuration: 12 veins, 7 and 8 stalked, 7 to costa.

Hind wings with the abdominal angle well developed, narrow, tapering rapidly to an acute point. Neuration: 8 veins, 3 separate, 4 and 5 stalked.

Abdomen somewhat flattened. Legs: hind tibiæ hairv above.

So far as neuration is concerned, the European species *Blasto-basis anthophaga*, Stgr., should be placed in this genus; but the form of the antennæ differs materially in not possessing the tæniaform character which distinguishes the type, although it agrees with it in having no notch.

### 102. Iconisma macrocera, sp. n.

Antennæ with the basal joint dirty whitish, brownish cinereous beyond. Palpi dull whitish, shaded with fuscous at the sides except at the tips of the second and apical joints. Head dull whitish. Thorax hoary whitish. Fore wings hoary whitish, with three elongate fuscous streaks, the first from the base running below the costa to one-third, the margin above it being also slightly shaded with fuscous; the second also from the base following the fold to the dorsum; the third along the outer portion of the cell, commencing slightly before the middle of the wing and ending with the cell; some scattered fuscous sprinkling around the margins extends into the cilia, which have a slight ochreous tinge except along the costa, where they are whitish. Exp. al. 10 mm. Hind wings pale greyish; cilia tinged with ochreous. Abdomen greyish ochreous. Legs pale cinereous.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 15 III.-8 IV. (Gudmann, Hedemann). Three specimens.

#### V. XYLORYCTIDÆ.

## 31. GLYPHIDOCERA, WISM.

103. GLYPHIDOCERA AUDAX, Wlsm.

Glyphidocera audax, Wlsm. Pr. Z. Soc. Lond. 1891, 531-2, 547, Pl. XLI. 8 a-c (1892) <sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

# 104. GLYPHIDOCERA DOMINICELLA, sp. n.

Antenne pale fawn-brown. Palpi, head, and thorax fawn-grey. Fore wings fawn-grey, sparsely sprinkled with olive-brown; with two olive-brown spots on the disc, one at its outer extremity, the other halfway between this and the base; cilia fawn-grey with a slight ochreous tinge. Exp. al. 15 mm. Hind wings and cilia brownish olivaceous. Abdomen brownish olivaceous. Legs scarcely paler than the hind wings.

Type, & Mus. Wlsm.

Hab. West Indies—Dominica (Point Michell, 29 V.). Two

specimens.

This species differs from audax, Wlsm., in having the base of the costa of the fore wings less abruptly arched, and in the hind wings being more opaque and having paler cilia.

# 105. GLYPHIDOCERA RECTICOSTELLA, sp. n.

Antennæ strongly notched in the 3 beyond the basal joint, serrate towards the apex; ochreous beneath, shaded with greyish fuscous above. Palpi strongly recurved, laterally divergent; greyish fuscous. Head and face greyish fuscous. Thorax greyish

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fuscous with a slight purplish tinge. Fore wings greyish fuscous with a slight purplish tinge; a very faint indication of a dark spot at the end of the cell; cilia the same. Exp. al. 23-25 mm. Hind wings and cilia greyish brown. Abdomen greyish brown. Legs greyish, spurs and tarsi slightly paler.

Type,  $\mathcal{J} \supseteq \text{Mus. Wlsm.}$ 

Hab. West Indies-Grenada (Balthazar, 250 ft., windward side, 1 IV.-4 V.; Mount Gay Estate, 300 ft., leeward side,

25 VIII.-10 IX.—H. H. Smith). Seven specimens.

This species differs from audax, Wlsm., in the absence of a distinct humeral angle on the costa at the base of the fore wings. This seems to be also absent in the female of audax, and it is possible that this may turn out to be a characteristic of the females of both species, or that the single female of audax has been wrongly identified, but I have not sufficient material to decide this point.

## 32. Antæotricha, Z.

## 106. Anteotricha suffumigata, sp. n.

Antennæ smoky white. Palpi recurved, slender, apical joint nearly as long as the second; white. Head and face white. Thorax smoky white in front, paler posteriorly. Fore wings elongate, subovate; shining white, the extreme costa delicately shaded with smoky brown and also the dorsal third of the wing from the base below the fold and beyond it to the termen above the tornus; cilia white. Exp. al. 16-20 mm. Hind wings and cilia pale smoky greyish; 3 with long brush of greyish hairs from base of costa. Abdomen smoky white. Legs white.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 15 III.-30 IV.; Mount Gay Estate, 300 ft., leeward side, 1-5 X.—H. H. Smith). Six specimens.

# 107. Antæotricha tibialis, Z.

Anteotricha tibialis, Z. Hor. Soc. Ent. Ross. XIII. 307-9, Pl. III. 90 (1877).

Hab. West Indies—Trinidad (Schaus, Urich; Port of Spain, Hart). Brazil (?) 1.

# 108. Antæotricha griseana, F.

= \* WALCHIANA, Z. (nec Cram.) 8.

Pyralis griseana, F. Ent. Syst. III. (2) 265. No. 96 (1794)<sup>1</sup> Turton, Syst. Nat. III. 352 (1806)<sup>2</sup>. Stenoma griseanum, Z. Is. 1839, 195<sup>3</sup>. Antæotricha walchiana, Z. Lin. Ent. IX. 391–3, Pl. III. 29–30 (1854)<sup>4</sup>. Pyralis griseana, Z. Lin. Ent. IX. 393 (1854)<sup>5</sup>. Antæotricha walchiana, Wkr. Cat. Lp. Ins. B.M. XXIX. 773 (1864)<sup>6</sup>. Antæotricha griseana, Z. (partim) Hor. Soc. Ent. Ross. XIII. 315 (1877)<sup>7</sup>; Wlsm. & Drnt. Merton Rules 12 (1896)<sup>8</sup>.

Hab. West Indies ("Americae meridionalis Insulis")<sup>1,2</sup>— TRINIDAD (Schaus). CAYENNE (Mus. Wlsm.). BRAZIL 6—Cametá4.

The specimens which Zeller described in the 'Isis' as Stenoma griseanum, F. (?), and again in the 'Linnæa Entomologica' as Anteotricha walchiana, Cram., are before me. They are certainly not walchiana, Cram., which was redescribed by Walker as Cryptolechia lativittella. In the 'Horæ' Zeller revived Fabricius's name for still another species from Chiriqui with greenish markings towards the apex. If he were justified in doing this, then the species known as walchiana (Zeller, nec Cramer) would be nameless. Fabricius's description is hardly precise enough to enable one to identify a species of this group with certainty, but there appears to be no evidence to prove that Zeller was wrong in his first conception of griseana, F. Moreover I now record Zeller's original griseana from Trinidad, which agrees well with Fabricius's locality "Americæ meridionalis Insulis;" and as Zeller, in 1839, limited the name to this form, I think the concluding sentence of paragraph 15 of the Rules compiled by the German Zoological Society may be held to apply with the addition of the words in brackets: "In doubtful cases the decision of the author who makes the [first] separation [or restriction] shall be followed."

[I add the synonymy of the species not occurring in the West Indies, referred to above, and have proposed a new name for Zeller's latest conception of griseana, F.

Antæotricha Walchiana, Cram. & Stoll.

(nec WALCHIANA, Z.); n. syn. = LATIVITTELLA, Wkr.

Phalæna (Tortrix) walchiana, Cram. & Stoll, Pap. Exot. IV. 191, 252 (Essai Syst. Lp.), 27, Pl. 384, F. (1782) <sup>1</sup>. Tortrix? walchiana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 325 (1863) <sup>2</sup>. Cryptolechia lativittella, Wkr. Cat. Lp. Ins. B.M. XXIX. 720–1 (1864) <sup>3</sup>.

Hab. Venezuela 3; Surinam 1, 2; Brazil 3 (Espiritu Santo, Schmidt; Cor-

corado, Schaus; and Sta. Catherina, Mus. Wlsm.).

Antæotricha zelleri, Wlsm. & Drnt.

 $= * GRISEANA, Z.^2$ 

Antæotricha griseana, Z. Hor. Soc. Ent. Ross. XIII. 315-6, Pl. IV. 95 1877) <sup>1</sup>. Antæotricha zelleri, Wlsm. & Drnt. Merton Rules 12 (1896) <sup>2</sup>. Hab. Panama—Chiriqui 1.]

109. Antæotricha? sinuata, F.

 $= \S DENTELLA, F.^2$ 

Alucita dentella, F. Ent. Syst. III. (2) 343. No. 49 (1794) 1. Ypsolophus sinuatus, F. Sppl. Ent. Syst. 509. No. 20 (1798)2. Phalæna (Alucita) dentella, Turton, Syst. Nat. III. 383 (1806) 3.

"dentella. 49. A. alis obscure cinereis: vitta media dentata fusca.

"Corpus parvum, cinereum. Alæ obscure cinereæ vitta lata, interne dentata in medio alæ. Pedes albi.

"Habitat in America Insulis, Dom. v. Rohr." = West Indies 1-3.

## 33. DIASTOMA, Mschl.

## 110. DIASTOMA SQUAMOSA, WISM.

Diastoma squamosa, Wlsm. Pr. Z. Soc. Lond. 1891, 524, 546 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

# 34. Anadasmus, g. n. $(\dot{a}\nu a \delta a \sigma \mu \dot{o} s = a \text{ division.})$

# Type, Cryptolechia soraria, Z.

Antennæ  $\frac{2}{3}$ , basal joint somewhat enlarged, without pecten;  $\delta$  biciliate (2).

Labial palpi strongly recurved, second joint thickened, with appressed scales beneath, apical joint shorter than the second.

Maxillary palpi well developed, appressed to the haustellum.

Haustellum thickly scaled.

Head with appressed scaling, side tufts spreading, margined with hairs posteriorly.

Thorax smooth.

Fore wings: costa arched at the base, thence almost straight to the slightly depressed and rounded apex, termen almost perpendicular, tornus rounded. Neuration: 12 veins, all separate, 8 to costa, 5 approximated to 4, and 6 to 7, 2 from near lower angle.

Hind wings broader than the fore wings, costa hardly depressed beyond middle (without long hair tuft in  $\delta$ ), apex rounded, slightly sinuate beneath apex, thence evenly rounded; cilia short. Neuration: 8 veins, 6 and 7 very closely approximated towards origin, 3 and 4 almost connate, 1 b furcate at base.

Abdomen rather stout.

Legs: hind tibiæ clothed with short rough scales.

Closely allied to Gonioterma, Wlsm., from which it differs in vein 8 of the fore wings attaining the costa.

# 111. Anadasmus immundus, Z.

Cryptolechia immunda, Z. Lin. Ent. IX. 360-1 (1854)<sup>1</sup>; Wkr. Cat. Lp. Ins. B.M. XXIX. 711 (1864)<sup>2</sup>; Z. Hor. Soc. Ent. Ross. XIII. 259 (1877)<sup>3</sup>.

Hab. West Indies—Trinidad (Schaus). Brazil 1,2.

# 112. Anadasmus albanus, F.

= § LACTEELLA, F.2; n. syn. = TENERA, Z.

Tinea lacteella, F. Ent. Syst. III. (2) 313. No. 116 (1794)<sup>1</sup>. Pyralis albana, F. Sppl. Ent. Syst. 476. No. 31-2 (1798)<sup>2</sup>. Cryptolechia tenera, Z. Lin. Ent. IX. 364-5 (1854)<sup>3</sup>, X. 153-4 (1855)<sup>4</sup>; Hor. Soc. Ent. Ross. XIII. 259, 263-4 (1877)<sup>5</sup>.

Hab. West Indies (= in Americæ Insulis)<sup>2</sup>. S. AMERICA <sup>1</sup>—PANAMA, Chiriqui <sup>5</sup>; VENEZUELA, La Guayra <sup>4</sup>; CAYENNE (Mus.

Wlsm.); Brazil-Pará (Mus. Wlsm.); Santa Catherina (Mus.

Wlsm.).

Fabricius probably changed the name lacteella to albana because Schiffermüller had already published a Tinea lactella. Zeller (l. c. No. 3) considered tenera distinct from Fabricius's species, principally from the antennæ not agreeing with the original description (l. c. No. 1), but this was emended (l. c. No. 2); and Zeller, while not admitting that tenera was a synonym of albana in the 'Horæ,' was evidently coming round to the opinion that his species was not distinct from that of Fabricius. I have a very large amount of material (mostly undescribed) belonging to this family, and the only species to which Fabricius's description can be applied is tenera, Z.; I am therefore not disposed to maintain these two names as representing distinct species.

# 35. Gonioterma, g. n. $(\gamma \omega \nu i \alpha = \text{angle}; \tau i \rho \mu \alpha = \text{a boundary.})$

Type, Phalæna (Tortrix) burmanniana, Cram. & Stoll.

Antennæ  $\frac{2}{3}$ , basal joint somewhat enlarged, without pecten;  $\vec{\sigma}$  biciliate  $(1\frac{1}{2})$ .

Labial palpi strongly recurved, second joint thickened with appressed scales beneath, apical joint shorter than the second.

Maxillary palpi well developed, appressed to the haustellum.

Haustellum thickly scaled.

Head smooth, but with lateral hair-tufts often meeting above it. Thorax smooth.

Fore wings: costa arched at the base, thence straight almost to the apex, which is slightly depressed and rounded, termen almost perpendicular, tornus rounded. Neuration: 12 veins all separate, 8 to termen below apex, 5 approximated to 4, and 6 to 7, 2 from near lower angle.

Hind wings broader than the fore wings, costa depressed beyond middle (without long hair-tuft in  $\delta$ ), evenly rounded from the apex to the abdominal angle, cilia short. Neuration: 8 veins, 6 and 7 closely approximated, 3 and 4 separate but closely approximated,

1 b furcate at base.

Abdomen rather stout.

Leas: hind tibiæ clothed with short rough scales.

Allied to Anadasmus, Wlsm., but differing in vein 8 of the fore wings attaining the termen.

# 113. GONIOTERMA ISABELLA, F. & R.

Cryptolechia isabella, F. & R. Reise Nov., Lp. Pl. 139. 24 (1875)<sup>1</sup>.

Hab. West Indies—Trinidad (Schaus). Brazil—Amazons 1.

# 114. GONIOTERMA? PARVELLUM, F.

Alucita parvella, F. Ent. Syst. III. (2) 343-4. No. 50 (1794)<sup>1</sup>

Tinea parvella, F. Sppl. Syst. Ent. 500. No. 109 (1798)<sup>2</sup>. Phalæna (Alucita) parvella, Turton, Syst. Nat. III. 383 (1806) 3.

"parvella. 50. A. alis obscure cinereis: maculis duabus costalibus fuscis.

"Statura parva præcedentis. Alæ incumbentes, cinereæ, maculis duabus costalibus fuscis.

"Hab. in America Insulis, Dom. v. Rohr." = West Indies 1-3. This appears to be allied to burmanniana, Cram. & Stoll.

#### ${ m VI.} \,\, { m ELACHISTID} ar{{ m ELACHISTID}}$

#### I. COLEOPHORINÆ.

36. Coleophora, Hb.

## 115. Coleophora pulchricornis, sp. n.

Antennæ white, beautifully ringed throughout with black; basal joint not tufted. Palpi dusky whitish, shaded externally with fawn-colour; second joint with a slight projecting point of scales beneath its apex. Head and thorax dull fawn-grey. Fore wings dull fawn; with a whitish ochreous costal streak throughout, widening towards the apex, and including the costal cilia; joining this from the end of the cell are three whitish-ochreous streaks following the veins; along the cell from before the middle and extending a little beyond its outer end is a longitudinal streak composed of mixed whitish-ochreous and black scales running parallel with the costa; beneath it, commencing at the base and terminating before the end of the fold, is a similar slender streak in which black predominates; some whitish ochreous scales lie around the dorsum and termen at the base of the greyish cilia. Exp. al. 10 mm. Hind wings and cilia dark brownish grey. Abdomen brownish grey. Legs whitish. Type, Q and case Mus. Wism.

Hab. West Indies—St. Croix, 5 V. (Hedemann); St. Thomas,

12 III.-15 IV. (Gudmann, Hedemann). Three specimens.

Case cylindrical, mouth bent over but not projecting beyond the level of its lower side, apex triangular, its three angles somewhat flattened, the whole dull greyish ochreous; long. 13 mm.

Bred by Baron von Hedemann, but the plant not identified. The

larva was found on stone fences by Mr. Gudmann.

This species belongs to the group of troylodytella, Dp. &c., and is very similar to some of the European species; the mouth of the case is, however, more distinctly at a right angle to the case itself, and it is somewhat stouter in proportion to its length.

# 116. Coleophora picticornis, sp. n.

Antennæ stout, shorter than the fore wings; white, with four greyish-fuscous bands towards the apex. Palpi somewhat long and slender, slightly recurved, smooth, apical joint slightly shorter than the second; white. Head coppery fawn-brown, with a white line on either side running back from the base of the antennæ; face and tongue whitish ochreous. Thorax coppery fawn-brown. Fore wings coppery fawn-brown, with a shining white streak along the costa from the base to the costal cilia, the extreme costa edged with bright ochreous throughout, including the costal cilia; cilia coppery fawn-brown with a slight ochreous tinge. Exp. al. 10 mm. Hind wings brownish grey; cilia coppery fawn. Abdomen dark brownish grey, anal tuft subochreous. Legs pale cinereous, hind tibiæ somewhat clothed above.

Type, & Mus. Wlsm.

Hab. West Indies—HAYTI (Port-au-Prince, 23 V., Gudmann); St. Thomas, 10 IV. (Hedemann); Grenada (Balthazar, 250 ft., windward side, 15 IV.—H. H. Smith). Four specimens.

#### II. BATRACHEDRINÆ.

## 37. Pammeces, Z.

# 117. PAMMECES LITHOCHROMA, sp. n.

Antennæ (broken), basal joint elongate, enlarged posteriorly, with a distinct long pecten; stone-white. Palpi long and strongly recurved, laterally ascending, second joint rather strongly tufted above at its end; apical joint long and thin, slightly shorter than the second joint; pale stone-grey sprinkled with blackish atoms. Head and thorax smooth; stone-grey. Fore wings stone-grey, sprinkled with blackish atoms, especially along the costa; a minute black spot on the middle of the fold, another on the dorsum at its onter end, the latter somewhat elongate; a third minute elongate black spot lies at the end of the cell, and a few black dots around the termen at the base of the stone-grey cilia. Exp. al. 16 mm. Hind wings pale grey; cilia stone-grey. Abdomen stone-grey. Legs stone-whitish; hind tibie hairy above.

Type, & Mus. Gudmann.

Hab. West Indies—San Domingo (Puerto Plata, 16 V.—Gud-

mann). Unique.

The antennæ were between two and three times the length of the fore wings (Gudmann).

# 118. PAMMECES? PALLIDA, sp. n.

Antennæ longer than the fore wings, with a distinct pecten on the basal joint; dirty white. Palpi: the second joint with a sloping brush above at its end, apical joint slender, naked, less than half the length of the second; white, with a smoky shade on the second joint externally. Head and thorax white. Fore wings shining white, with two or three small fuscous spots along the fold, and four minute fuscous dots on the costa along the base of the smoky white cilia. Exp. al. 13 mm. Hind wings shining, very pale

grey; cilia dull smoky white. Abdomen whitish. Legs white; hind tibiæ hairy above.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 10 IV. (Hedemann). Unique. This species differs from albivitella, Z., and lithochroma, Wlsm., in the much shorter apical joint of the palpi.

# 38. SYNTOMACTIS, Meyr. [Meyr. Tr. N. Z. Inst. XXI. 173 (1889).]

119. SYNTOMACTIS? CERVINELLA, sp. n.

Antennæ longer than the fore wings; pale fawn-ochreous. Palpi somewhat recurved, slender, smooth, the apical joint nearly as long as the second; pale fawn-ochreous. Head and thorax pale fawn-ochreous. Fore wings very narrow, elongate; pale fawn-ochreous, speckled with brownish fuscous in a line along the fold with another above it, as well as around and about the apical portion of the wing; the more conspicuous dots being one at the outer third of the fold, one at the end of the cell, and one in the same line beyond it; cilia pale fawn-ochreous. Exp. al. 12 mm. Hind wings and cilia pale yellowish grey. Abdomen shining pale fawn-ochreous. Legs scarcely paler, unspotted; hind tibiæ with long pale hairs above.

Type, & Mus. Hedemann.

Hab. West Indies—St. Croix, 24 IV. (Gudmann); St. Thomas,

11 III. (Hedemann). Two specimens.

This species appears to differ from Syntomactis, Meyr., only in its longer antennæ. I am not at present disposed to create a new genus for its reception. Zarathra differs in its very much longer palpi.

# 39. Batrachedra, Stn.

# 120. Batrachedra albistrigella, Mschl.

Batrachedra albistrigella, Mschl. Ab. Senck. Nat. Ges. XV. 345, 354 (1891)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 538, 548 (1892)<sup>2</sup>.

Hab. West Indies—Portorico<sup>1,2</sup>.

# 121. Batrachedra stigmatophora, sp. 11.

Antennee with distinct white and fuscous annulations. Palpi slender, slightly recurved; yellowish white. Head and thorax whitish ochreous. Fore wings fawn-ochreous, mottled with whitish ochreous, thus forming an indistinct pale fascia at about one-fourth from the base, broader on the costal than on its dorsal extremity, sprinkled on its inner edge with minute black scales; a second pale space occurs about the middle of the wing, also irregularly sprinkled with minute black scales; towards the apex the costa and dorsum are both blotched with whitish ochreous, a streak of black scales running between the blotches to the apex and through the apical cilia: cilia greyish, whitish ochreous immediately beneath

1897.7

the apex. Exp. al. 8 mm. Hind wings grey; cilia pale grey. Abdomen ochreous. Legs whitish, obliquely blotched with fuscous externally, spurs banded with black.

Type, & Mus. Wlsm.

Hab. West Indies—HAYTI (Cap Haiti, 18 V.—Gudmann); St. THOMAS, 12 III.-17 IV. (Gudmann, Hedemann). Five specimens.

## 122. Batrachedra tarsimaculata, sp. n.

Antennæ whitish ochreous, thickly barred above with fuscous, this colour forming three dark annulations before the apex. Palpi whitish, second joint with two fuscous spots, apical joint with two fuscous bands, one before the apex, the second near its base. Head whitish. Thorax dull straw-white. Fore wings dull straw-white; a short curved fuscous streak from the base below the fold; a long streak above it, also from the base, running along the costa to onethird the wing-length, thence slightly deviating downwards to the end of the cell; beneath its apex is a small dorsal spot, and above its apex commences on the costa another dark streak, which leaving the pale costal cilia runs to the apex and narrowly through the apical cilia (these markings are all dark fuscous); cilia strawwhite, tending to greyish about the tornus. Exp. al. 6 mm. Hind wings and cilia brownish grey. Abdomen shining whitish ochreons. Legs straw-white; hind tibiæ obliquely banded exterually and their tarsi distinctly biannulate with dark fuscous.

Type, Q Mus. Wlsm.

Hab. West Indies—St. Thomas, 6 III.-9 IV. (Gudmann, Hedemann). Four specimens.

#### III. COSMOPTERYGINÆ.

# 40. Cosmopteryx, Hb.

123. Cosmopteryx attenuatella, Wkr.

n. syn. = LESPEDEZÆ, Wlsm.

Gelechia attenuatella, Wkr. Cat. Lp. Ins. B. M. XXX. 1019 (1864)1. Cosmopteryx lespedezæ, Wlsm. Tr. Am. Ent. Soc. X. 198 [? = Cosmopteryx (? gemmiferella, Clem.), Mschl. Ab. Senck. Nat. Ges. XV. 345, 354 (1890)3; Wlsm. Pr. Z. Soc. Lond. 1891, 536, 548 (1892)<sup>4</sup>.] Cosmopteryx lespedezæ, Riley, Smith's List Lep. Bor. Am. 107. No. 5771 (1891)<sup>5</sup>. Gelechia attenuatella, Wlsm. Pr. Z. Soc. Lond. 1891, 519, 545 (1892)6. Cosmoptery. lespedezæ, Wlsm. Pr. Z. Soc. Lond. 1891, 536, 548 (1892)7.

Hab. United States 2,5—Texas 7, N. Carolina 7. Larva Lespeeleza2,7. West Indies—Jamaica1,6; Hayri (Port-au-Prince, 22 V., Gudmann); [? Portorico<sup>3,4</sup>]; St. Croix, 3-31 V. (Gudmann, Hedemann, Pontoppidan); St. Vincent<sup>7</sup>; Grenada (Balthazar,

250 ft., windward side, 15 III.-15 IV. H. H. Smith).

Bred by Mr. Gudmann at St. Croix, but the plant not identified. Cosmopteryx gemmiferella, Clem., is not known to occur in the West Indies, and the species recorded by Möschler is probably attenuatella, but as it is not described I am unable to identify it; there is, however, no reason for including genniferella in the West Indian fauna on such a slight and doubtful identification.

## 124. Cosmopteryx similis, sp. n.

Antennæ smoky white, with a broad darkish band before the apex preceded by a narrow black ring, the apex itself being black; these markings are all outlined in clear white. Palpi shining Head and thorax greyish brown, with a central, and two lateral, slender whitish streaks. Fore wings greyish brown to fully half the wing-length, a broad pale orange-yellow band preceding the greyish-brown apex and cilia, in which are a triangular clear white costal spot and a slender white line running through the apex; the pale orange space is oblique on its inner margin, and extends backwards a little on the costa, it is preceded by two golden metallic spots, one below the other beyond its middle, the latter being tipped with black; on its outer edge it sends forward a slight projection below the white costal spot into the brown apical portion, this projection being margined above and beneath by golden scales; on the brown basal half of the wing are four slender white streaks, one along the dorsum, one commencing on the base at the costa and diverted very obliquely downwards a little beyond the base, and two intermediate straight streaks, of which the lower is longer than the upper and reaches nearly to the lower of the two metallic spots. Exp. al. 8-9 mm. Hind wings pale brownish grey; cilia the same. Abdomen brownish ochreous. Legs whitish clouded with brown.

Type, of Mus. Wlsm.

Hab. West Indies—St. Croix, 3 V.-24 VI. (Gudmann, Hedemann, Pontoppidan); St. Thomas, 8 III.-5 IV. (Gudmann). Five

specimens.

This species is very nearly allied to attenuatella, Wkr., but differs in the more oblique inner margin of the yellow transverse fascia, in the nearer approach to it of the lower streak on the basal patch, and in the broken metallic band which separates this from the fascia, which appears to encroach more considerably upon the dark apical portion of the wing.

# 125. COSMOPTERYX SANCTI-VINCENTI, Wlsm.

Cosmopteryx sancti-vincenti, Wlsm. Pr. Z. Soc. Lond. 1891, 536-7, 548 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT<sup>1</sup>; GRENADA (Chantilly Estate, 350 ft., windward side, 13 IV.—H. H. Smith).

# 126. Cosmopteryx abnormalis, sp. n.

Antennæ blackish, speckled with white and biannulated with white before the apex, a silvery spot on the basal joint. Palpi whitish, shaded above with fuscous. Head dark slaty grey.

Thorax dark brown. Fore wings dark umber-brown, with brilliant silver-white metallic spots—two at one-fourth from the base forming a scarcely broken oblique fascia tending outward from the costa to the dorsum; two on the middle, one costal the other dorsal, both straight; two at one-third from the apex, almost joined, not reaching the costa, with a silvery white streak in the commencement of the costal cilia; beyond these another metallic silvery dot lies at the extreme apex, and a silvery white streaklet at the extremity of the apical cilia; dorsal cilia purplish grey. Exp. al. 8 mm. Hind wings dark vinous grey; cilia purplish grey. Abdomen dark brown speckled with metallic scales. Legs dark brown, spurs and tarsal joints whitish.

Type, & Mus. Gudmann.

Hab. West Indies—Hayti (Port-au-Prince, 24 V.—Gudmann). Unique.

#### IV. LAVERNINÆ.

#### 41. ANYBIA, Stn.

## 127. Anybia conspersa, Wlsm.

Anybia conspersa, Wlsm. Pr. Z. Soc. Lond. 1891, 537, 548 (1892)<sup>1</sup>.

Hab. West Indies—SAN DOMINGO (Monte Christi, 17 V.—Gudmann); St. Thomas, 8 IV. (Gudmann); St. Vincent<sup>1</sup>; Grenada (Balthazar, 250–300 ft., windward side, 20 IV.–8 V.—H. H. Smith).

Bred by Mr. Gudmann at St. Thomas, from larvæ feeding "in

the pulses of Abrus precatorius."

# 128. Anybia piperatella, sp. n.

Antennæ: the basal joint enlarged on its outer half; dust-grey. Palpi dust-grey, the apical joint slightly mottled externally. Head and thorax dusty grey. Fore wings dust-grey, minutely speckled with fuscous; cilia brownish grey. Exp. al. 9 mm. Hind wings and cilia pale brownish grey. Abdomen and legs brownish grey; anal tuft in the male ochreous.

Type, Q Mus. Wlsm.

Hab. West Indies—St. Croix, 8-26 V. (Hedemann, Pontoppidan); St. Thomas, 20 III.-14 IV. (Gudmann, Hedemann). Seven specimens.

# 129. Anybia curvipunctella, Wlsm.

Anybia curvipunctella, Wlsm. Pr. Z. Soc. Lond. 1891, 538, 548 (1892)<sup>1</sup>.

Hab. West Indies—St. Croix, 24-29 IV. (Hedemann); St. Thomas, 6 IV. (Gudmann); St. Vincent<sup>1</sup>; Grenada (Balthazar, 250-300 ft., windward side, 4-8 V.—H. H. Smith).

A series of specimens, evidently of this species, received from St. Croix, St. Thomas, and Grenada, has enabled me to observe that the semicircular spot on the fold from which the name is taken is somewhat an exceptional marking; it is scarcely traceable in any of the specimens now before me, and in the majority of them is entirely absent. I have, however, no hesitation in identifying them as belonging to the same species.

## 130. Anybia tripunctata, sp. n.

Antennæ tawny fuscous. Palpi whitish ochreous, shaded with fuscous externally. Head and thorax tawny fuscous; face shining whitish ochreous. Fore wings tawny fuscous with a vinous sheen; three dark fuscous spots, a pair on the outer half of the cell in line with each other, connected by a short whitish ochreous streak, the third on the middle of the fold tipped with whitish ochreous at its outer extremity; cilia greyish with a vinous tinge. Exp. al. 8 mm. Hind wings and cilia greyish with a slight vinous tinge. Abdomen and legs whitish ochreous.

Type, Q Mus. Hedemann.

Hab. West Indies—St. Croix, 29 IV. (Hedemann); St. Thomas, 10 III. (Gudmann). Two specimens.

# 131. Anybia metallifera, sp. n.

Antennæ brownish fuscous. Palpi pale cinereous. Head smooth, greyish; face whitish, shining. Thorax and fore wings coppery brown, the latter with chalybeous bands and spots; a narrow fascia at one-fourth is followed by a central fascia of the same colour, which is wider toward the dorsum than on the costa; at the tornus is an outwardly curved patch pointing toward a small spot at the apex, another spot occurring on the costa at the commencement of the cilia; these markings are all bluish chalybeous; cilia brownish fuscous. Exp. al. 8 mm. Hind wings pale coppery brown, with brownish-fuscous cilia. Abdomen greyish fuscous, with some chalybeous scales above. Legs brownish fuscous.

Type, ♀ Mus. Wlsm.

Hab. West Indies—Jamaica (Monteague, 1200 ft., I.—Cockerell). Unique.

#### V. HELIODININÆ.

# 42. Heliodines, Stn.

Heliodines, Stn. Ins. Br. Lp. Tin. 243 (1854).

=[Chrysoesthia, Hb. Verz. bek. Schm. 422 (1826) partim.] † Chrysesthia, HS. Schm. V. 314 (1855).

=ÆTOLE, Chamb. Can. Ent. VII. 73 (1875).

Herrich-Schäffer's restriction of *Chrysoesthia*, Hb., is subsequent to the publication of *Heliodines* by Stainton, whose name is therefore entitled to stand for the genus of which *roesella*, L., is the type.

## 132. Heliodines marginata, Wlsm.

Heliodines marginata, Wlsm. Pr. Z. Soc. Lond. 1891, 535, 547 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

## 133. Heliodines schulzella, F.

Tinea schulzella, F. Ent. Syst. III. (2) 321–2. No. 152 (1794)<sup>1</sup>: Suppl. Ent. Syst. 498. No. 92 (1798)<sup>2</sup>. Phalæna (Tinea) schulzella, Turton, Syst. Nat. III. 376 (1806)<sup>3</sup>.

"schulzella. 125. T. alis auratis: lineis duabus oppositis

marginalibus punctorum argenteorum, costa atra.

"Corpus parvum. Antennæ atræ. Caput et thorax atra, nitida, pectoris marginalibus aureis. Abdomen aureum. Alæ aureæ, nitidæ, lineis duabus oppositis e punctis argenteis, altera costæ nigræ adjacente, altera margini tenuiori. Posticæ nigræ.

"Habitat in America meridionalis Ins., Dr. Pflug" 1. = West

Indies 1,3 (probably St. Croix or St. Thomas, Wlsm.).

There appears to be little doubt that the above description was taken from a species of *Heliodines* which differs from any known to me. It appears to be intermediate between marginata and quinqueguttata, agreeing with the former in having a black costa, but differing from it in the possession of metallic spots; quinqueguttata agrees in having the metallic spots, but the costa is not black.

# 134. Heliodines quinqueguttata, sp. 11.

Antennæ simple; shining bronzy grey. Palpi short, slender, drooping; shining pale æneous. Head smooth; shining bronzy. Thorax bronzy grey, golden orange beneath. Fore wings to beyond the middle golden orange, with the extreme base and 5 spots (3 subcostal and 2 intermediate dorsal, the dorsal spots alternating with the costal) all shining bronzy metallic, slenderly outlined with black scales in some lights; rather more than the apical third of the wing is shining bronzy metallic, extending farther along the dorsum than along the costa, its inner edge being indented on the cell; cilia bronzy grey. Exp. al. 8.5 mm. Hind wings shining bronzy; cilia bronzy grey. Abdomen shining bronzy brownish, with a bright metallic whitish patch along the first three segments beneath; anal tuft whitish. Legs bronzy brownish, with paler shining bands and spurs.

Type, & Mus. Wlsm.

Hab. West Indies—Jamaica (Kingston, 10 XII.—T. D. A. Cockerell); St. Thomas, 11 III.—12 IV. (Gudmann, Hedemann). Five specimens.

Bred by Mr. Cockerell in Jamaica "from galls on *Portulaca* sp.; these galls produced also a *Cecidomya*, which was probably the gall-maker." Mr. Gudmann also bred this species in St. Thomas.

"Raupe hellgrün, mit hellbraunem Kopf; 16-füssig. Vom Kopf bis zum After allmählig an Breite zunehmend; auf dem Rücken finden sich zwei und auf jeder Seite eine Längsreihe sehr feinen schwarzen, behaarten Punkte, so dass auf jedem Segment sich acht solchen befinden. Die Raupe lebte an einer niedrigen Pflanze mit sehr feinem Gespinnste auf der Unterseite der Blätter, ging aber, wenn es frass, minirend in das Blatt hinein." (Gudmann.)

"The moth holds the second pair of legs outstretched as in

Stathmopoda" (Hedemann).

## 135. Heliodines aureoflamma, sp. n.

Antennæ and palpi shining bronzy grey, the latter somewhat paler. Head and thorax shining bronzy grey, the face and the underside of the thorax shining pale æneous. Fore wings golden orange, with two basal streaks, five spots, and two apical streaks all shining chalybeous; the two basal streaks lie along the upper edge of the fold and along the dorsum respectively; the spots are two subcostal before and beyond the middle and three dorsal alternating with them, the second dorsal being between the two subcostal ones; the apical streaks lie one below the costa, the other commencing nearer to the apex and running along the base of the subapical cilia; cilia bronzy grey. Exp. al. 8 mm. Hind wings bronzy brown; cilia bronzy grey. Abdomen bronzy brownish; beneath shining pale æneous. Legs shining steel-grey; tibiæ orange.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 9 III. (Hedemann). Unique. "The moth holds the second pair of legs outstretched as in Stathmopoda" (Hedemann).

#### VI. HELIOZELINÆ.

# 43. Heliozela, HS.

# 136. HELIOZELA CUPREA, sp. n.

Antennæ with the basal joint elongate, slightly enlarged posteriorly; bronzy cupreous. Palpi steel-white. Head and face, thorax and fore wings unicolorous bronzy cupreous; cilia coppery grey. Exp. al. 7 mm. Hind wings and cilia coppery grey. Abdomen dark bronzy cupreous. Legs cupreous; tarsal joints paler.

Type, д Mus. Hedemann. Hab. West Indies—St. Тномая, 16 III. (Hedemann). Unique.

# 137. HELIOZELA AHENEA, sp. n.

Antennæ purplish grey. Palpi, head, and thorax shining, metallic, brassy; underside of thorax brassy metallic. Fore wings brassy metallic, without markings; the scales being laid on in transverse lines give a slightly ribbed appearance under the lens; cilia purplish grey. Underside purplish grey. Exp. al. 4 mm. Hind wings and cilia purplish grey. Abdomen brassy metallic, tending to purplish grey at the anal extremity; underside brassy

metallic. Legs whitish; hind tarsal joints banded above with dark grey.

Type, & Mus. Hedemann.

Hab. West Indies—Hayri (Port-au-Prince, 24 V.—Gudmann); St. Thomas, 12 IV. (Hedemann). Two specimens.

#### VII. SCYTHRINÆ.

## 44. Œcia, g. n.

(ourelos = belonging to the house.)

Type, Ecia maculata, Wlsm.

Antennæ longer than the fore wings, simple, stout; basal joint without pecten.

Labial palpi diverging, smooth; second joint porrect, rather

stout; apical joint erect, nearly as long as the second.

Maxillary palpi rudimentary.

Ocelli present.

Haustellum absent.

Head and thorax clothed with appressed scales.

Fore wings elongate, costa rather straight, apex slightly depressed, bluntly pointed; termen oblique; tornus not developed.

Neuration: 12 veins, 7 and 8 stalked, 7 to apex.

Hind wings hardly as broad as the fore wings, costa straight, abdominal angle distinct, dorsum tapering to the pointed apex; cilia 2. Neuration: 8 veins, 6 and 7 long-stalked, 3 and 4 remote, 5 almost parallel with 4.

Abdomen slightly flattened.

Legs: hind tibiæ and first joint of the tarsi with long loose hairs above.

Allied to *Endrosis*, Hb., and having apparently the same habits, but differing in having vein 6 of the hind wings present, 3 and 4 separate, and the haustellum absent.

# 138. ŒCIA MACULATA, sp. n.

Antennæ smoky greyish. Palpi pale ochreous. Head pale straw-ochreous. Thorax pale straw-ochreous, shaded with smoky grey. Fore wings pale straw-ochreous, blotched and margined with smoky grey; this colour commencing near the base extends along the fold and along the costa without including the costal cilia and embraces the apex; on the middle of the fold is a stronger blotch of the same colour, slightly diffused downwards to the dorsum; a similar blotch a little above and beyond it scarcely before the middle; a third at the end of the cell extending almost across the wing; cilia pale straw-ochreous. Exp. al. 10-12 mm. Hind wings shining pale yellowish grey; the cilia with a slight ochreous tinge. Abdomen pale ochreous. Legs with the tibiæ and tarsi somewhat hairy; whitish ochreous.

Type, of Q Mus. Wlsm.

Hab. West Indies—St. Thomas, 16-18 III. (Hedemann). Brazil—Pará (Amazons), 9 X.-10 I. (Schulz). Twelve specimens.

"Very common on the inner walls of nearly every house in

St. Thomas " (Hedemann).

This species so greatly resembles *Tineola uterella*, Wlsm., that, without examining the head and palpi, they might easily be placed in the same series.

# VII. HYPONOMEUTIDÆ.

#### I. HYPONOMEUTINÆ.

45. ATTEVA, Wkr.

Atteva, Wkr. Cat. Lp. Ins. B.M. II. 526 (1854).

- =§Pœciloptera, Clem. Pr. Ac. Nat. Sc. Phil. XII. 546-7 (1860).
- = Amblothridia, Wlgrn. Resa Eugen., Zool. Ins. 385 (1861).
- = Corinea, Wkr. Cat. Lep. Ins. B.M. XXVIII. 542 (1863).
- =  $E_{TA}$ , Grt. Pr. Ent. Soc. Phil. V. 230-1 (1865).
- = Scintilla, Gn. Ann. Soc. Ent. Fr. (5 s.) IX 287 (1879).
- = Syblis, Gn. Ann. Soc. Ent. Fr. (5 s.) IX. 288-9 (1879).

Berg [An. Soc. Ci. Argent. X. 99-100 (1880)] seems to have had full justification for uniting all the generic names given above. Moore had already (Pr. Z. Soc. Lond. 1867, 669) sunk *Corinea*, Wkr., and *Amblothridia*, Wlgrn., as synonyms of *Atteva*, Wkr.

# 139. ATTEVA PUNCTELLA, Cram. & Stoll.

= †PASTULELLA, F. <sup>2</sup>, ‡PUSTULELLA, F. <sup>3</sup>; PUSTULATA, F. <sup>4</sup>; = SUBTILIS, Hb. <sup>6</sup>; = AUREA, Fitch <sup>25</sup>; = COMPTA, Clem. <sup>20</sup>; = GEMMATA, Grt. <sup>25</sup>

Phalæna (Tinea) punctella, Cram. & Stoll, Pap. Exot. IV. 164, 251 (Essai Syst. Lp.) 28, Pl. 372, fig. L (1782) 1. Tinea pastulella, F. Mant. Ins. II. 241. No. 16 (1787) 2. Tinea pustulella, F. Ent. Syst. III. (2) 292. No. 20 (1794) 3. Lithosia pustulata, F. Sppl. Ent. Syst. 462. No. 16 (1798) 4. Phalæna (Tinea) pustulella, Turton, Syst. Nat. III. 363 (1806) 5. Crameria subtilis, Hb. Verz. bek. Schm. 168. No. 1737 (ante 1826) 6. Phycis punctella, Verloren, Cat. Syst. Lp. Cram. 138, 274 (1837) 7. Deiopeia aurea, Fitch, III. Rp. Ins. N.Y. 168-9 (1856) 8. Pœciloptera compta, Clem. Pr. Ac. Nat. Sc. Phil. XII. 547 (1860) 9. Deiopeia aurea, Morris, Syn. Lp. N. Am. 251-2 (1862) 10. Pœciloptera compta, Morris, Syn. Lp. N. Am. 312 (1862) 11. Deiopeia aurea, Pack. Pr. Ent. Soc. Phil. III. 106 (1864) 12. Pœciloptera compta, Grt. Pr. Ent. Soc. Phil. IV. 319 (1865) 13. Œta compta, Grt. Pr. Ent. Soc. Phil. IV. 319 (1865) 14. Cydosia punctella, Wkr. Cat. Lp. Ins. B. M. XXXXV. 1894 (1866) 15. Cydosia aurea, Grt. & Rbs. List Lp. N. Am. I. p. vii (1868) 16. Œta compta, Riley, I. Rp. Ins. Mo. 1868, 151-3, Pl. II. 22-3 (1869) 17; Z. Stett. Ent. Ztg. XXXII. 178 (1871) 13.

Eta aurea, Stretch, Ill. Zyg. & Bomb. N. Am. 159-60, Pl. VII. 10 (1872)<sup>19</sup>. Eta punctella, Z. Verh. z.-b. Ges. Wien, XXIII. 228-30 (1873)<sup>20</sup>; Riley, Pr. Ac. Sc. St. Louis, III. liii-iv. (1873)<sup>21</sup>. Eta gemmata, Grt. Bull. Buff. Soc. N. H. I. 93-4 (1873)<sup>22</sup>. Eta aurea, Stretch, Ill. Zyg. & Bomb. N. Am. 159-60, 240-2 (†aurera), Pl. VII. 10 (1874)<sup>23</sup>. Eta punctella, Chamb. Bull. U.S. G.G. Surv. IV. 159 (1878)<sup>24</sup>. Scintilla pustulella, Gn. Ann. Soc. Ent. Fr. (5 s.) IX. 287-8 (1879)<sup>25</sup>. Atteva punctella, Berg. An. Soc. Ci. Argent. X. 100-2 (1880)<sup>26</sup>. Eta compta, Riley, U.S. Ent. Com. (Dept. Intr.), Bull. VII. 13, 58 (1881)<sup>27</sup>; Pack. U.S. Ent. Com. (Dept. Intr.), Bull. VII. 132 (1881)<sup>28</sup>; Pack. U.S. Ent. Com. (Dept. Agr.), Rp. V. 669 (1890)<sup>29</sup>. Eta punctella, Wlsm. Pr. Z. Soc. Lond. 1891, 532, 547 (1892)<sup>30</sup>; Hdm. Stett. Ent. Ztg. LVII. 10-11 (1896)<sup>31</sup>.

Larva, Ailanthus glandulosus, VII–IX.  $^{17,18,20-21,23-4,26-30}$ ; Costella erecta  $^{31}$ .

*Hab.* United States (Georgia, Texas, Missouri)  $^{8-14,16-21,23,24,26,27-30}$ ; IX.-XI.  $hib.^{13,19,20,23}$ . Honduras (=Himalaya Mts. $^{15}$ )  $^{30}$ . West Indies.—Cuba  $^{22}$ ; St. Croix  $^{31}$ ; Trinidad  $^{30}$ . Surinam  $^{1,22,30}$ ; French Guiana (Cayenne)  $^{25,30}$ ; Colombia  $^{18}$ ; Brazil (Santarem, Villa Nova)  $^{15,30}$ ; Argentina (Buenos Aires)  $^{26,30}$ .

Grote seems to have been of the opinion that three species are represented in the above synonymy (which, if distinct, should receive the following names:—aurea, Fitch, United States; gemmata, Grt., West Indies; punctella, Cram., S. America); on the other hand, Riley and Berg considered that these names represent but a single species. I give the synonymy as I find it, withholding my own views until I have had the opportunity of studying more material.

# 140. Atteva fulviguttata, Z.

= GLAUCOPIDELLA, Gn. 3; = † FULVIGUTTELLA, Wlsm.

Eta fulviguttata, Z. Verh. z.-b. Ges. Wien. XXIII. 231-2 (1873)<sup>1</sup>. Syblis glaucopidella, Gn. Ann. Soc. Ent. Fr. (5 s.) IX. 289 (1879)<sup>2</sup>. Atteva fulviguttata, Berg, An. Soc. Ci. Argent. X. 106-7 (1880)<sup>3</sup>. Eta fulviguttella, Wlsm. Pr. Z. Soc. Lond. 1891, 532, 547 (1892)<sup>4</sup>.

Hab. West Indies—Jamaica 2-4. (Australia?) 1,4.

# 141. Atteva fastuosa, Z.

Eta fastuosa, Z. Hor. Soc. Ent. Ross. XIII. 225-7, Pl. III. 68 (1877)<sup>1</sup>. Atteva fastuosa, Berg, An. Soc. Ci. Argent. X. 109 (1880)<sup>2</sup>. Eta fastuosa, Wlsm. Pr. Z. Soc. Lond. 1891, 533, 547 (1892)<sup>3</sup>.

Hab. West Indies—Cuba 1-3.

# 142. Atteva siderea, Wlsm.

Œta siderea, Wlsm. Pr. Z. Soc. Lond. 1891, 533, 547 (1892) <sup>1</sup>. Hab. West Indies—San Domingo <sup>1</sup>.

Proc. Zool. Soc.—1897, No. VIII.

## 46. TAMARRHA, Wkr.

TAMARRHA, Wkr. Cat. Lep. Ins. B. M. XXIX. 816 (1864).

In my previous paper (Pr. Z. Soc. Lond. 1891, 527) I sunk the genus Tamarrha, Wkr., as a synonym of Psecadia, Hb. In this I was guided by the neuration of Tamarrha gelidella, Wkr., which is a true Psecadia. At that time I had seen only the type of Walker's other species nivosella, which is a female. The male of this species, however, shows a strong costal tuft of diverging hairs near the base of the hind wings, which separates it at once from Psecadia. It possesses veins 7 and 8 of the fore wings from a common stem, a character which also somewhat misled me as to its affinities; the length of the cell, however, and the general character of the neuration, together with the roughened head, seem to indicate an alliance with the Hyponomeutidæ rather than with the Ecophoridæ. I would therefore revive the generic name Tamarrha, Wkr., retaining nivosella as the type.

## 143. TAMARRHA NIVOSELLA, Wkr.

n. syn. = ADUSTELLA, Z.

Tamarrha nivosella, Wkr. Cat. Lp. Ins. B. M. XXIX. 817 (1864) <sup>1</sup>. Psecadia adustella, Z. Hor. Soc. Ent. Ross. XIII. 240–1 (1877) <sup>2</sup>; Mschl. Ab. Senck. Nat. Ges. XV. 343, 354 (1890) <sup>3</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892) <sup>4</sup>. Psecadia nivosella, Wlsm. Pr. Z. Soc. Lond. 1891, 528, 546 (1892) <sup>5</sup>.

Hab. West Indies—Cuba (Tring Mus.); Jamaica 1,5 (Schaus; Kingston, 24 VII., Cockerell; Newcastle, Mus. Ragonot, "No. 750—1894, Wlsm."); San Domingo 1,5; Portorico 2,3,4; Trinidad (Schaus).

# 47. EUARNE, Mschl. & Saalm.

# 144. EUARNE OBLIGATELLA, Mschl.

Enarne obligatella, Mschl. Ab. Senck. Nat. Ges. XV. 340, 354 (1890) 1; Wlsm. Pr. Z. Soc. Lond. 1891, 533, 547 (1892) 2.

Hab. West Indies—Portorico 1,2.

# 48. TRICHOSTIBAS, Z.

As nothing has been recorded of the life-history of this genus, I may remark that there are cocoons of *Trichostibas fumosa*, Z., in the Museums of Oxford and Cambridge Universities. In the Oxford Museum is a specimen of the imago with its cocoon and pupa labelled "Amazous, from pink cocoon—Bates" ("193. 1893. Wlsm."). I am not aware that its food-plant is known, but the cocoon is so remarkable that it is worth describing, if only in the hope that collectors in the West Indies or elsewhere may breed some of the species. The cocoon is of a pinkish-red colour, and is formed of a network of stiff threads; it is almost kidney-shaped, and at the anal extremity has a produced neck. It hangs free from a long stiff thread about an inch and a half long, which

is attached to the side before the anterior end; this thread is here trifurcate, one strand going downwards, the other two strands passing around the cocoon and uniting to form a loop at about one-fourth from the anterior extremity. These three strands and their stem appear to be spun first; the upper one probably passes round the whole cocoon and is attached to the loop before mentioned, and on these as a foundation the cross-threads, which traverse the cocoon obliquely, are probably spun, but this can only be determined from observing the habits of the spinning larva. In the Oxford Museum specimen the pupa is protruded from the upper extremity between the loop, which makes it difficult to understand for what purpose the neck at the anal extremity is constructed. The cocoons of a species of Trichostibas are figured hanging from branches in 'The Standard Natural History,' published by Cassino & Co., of Boston, Mass. I have only a separate copy of the article "Heterocera," by Professor Fernald, so I am unable to quote the volume—the "Fig. 557.—Cocoons of a Brazilian Tineid," occurs on p. 438, but I cannot find that it is noticed in the text. As Bates collected Trichostibas fumosa on the Amazons, there are probably specimens in the British Museum, and if Walker described them he would be most likely to locate the species in the Lithosiada.

#### 145. TRICHOSTIBAS CALLIGERA, Z.

Trichostibas calligera, Z. Hor. Soc. Ent. Ross. XIII. 231-2 (1877) ; Wlsm. Pr. Z. Soc. Lond. 1891, 533, 547 (1892) <sup>2</sup>. Hab. West Indies—Cuba <sup>1, 2</sup>.

## 146. TRICHOSTIBAS OVATA, Z.

Trichostibas ovata, Z. Hor. Soc. Ent. Ross. XIII. 233 (1877) ; Wlsm. Pr. Z. Soc. Lond. 1891, 533, 547 (1892) <sup>2</sup>. Hab. West Indies—Cuba <sup>1, 2</sup>.

# 147. TRICHOSTIBAS SORDIDATA, Z.

Trichostibas sordidata, Z. Hor. Soc. Ent. Ross. XIII. 233-4 (1877)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 534, 547 (1892)<sup>2</sup>. Hab. West Indies—Portorico 1,2.

# 148. Trichostibas? Iophlebia, Z.

Trichostibas iophlebia, Z. Hor. Soc. Ent. Ross. XIII. 228-9, Pl. III. 69 (1877) <sup>1</sup>. Trichostibas ? iophlebia, Wlsm. Pr. Z. Soc. Lond. 1891, 534, 547 (1892) <sup>2</sup>.

Hab. West Indies—Antilles 1,2.

# 149. TRICHOSTIBAS? PALLIDICOSTELLA, sp. n.

Antennæ blackish. Palpi short, slender, not projecting beyond the face, apical joint as long as the second; black. Head and thorax pale mouse-grey. Fore wings dark mouse-grey, the costa whitish grey throughout; cilia whitish grey, shading to dark

mouse-grey at the tornus. Underside unspotted, the pale costa showing on the outer half. Exp. al. 26 mm. Hind wings leaden grey; cilia paler. Abdomen dark leaden grey. Legs dark leaden grey, inclining to fuscous.

Type, Q Mus. Wlsm.

Hab. West Indies—Jamaica (Coll. Rayonot).

This is not a true *Trichostibas*; it differs from the type in having veins 4 and 5 of the hind wings connate and vein 2 recurved out of 3 instead of recurved out of the cell, but in the absence of the 3 I am unwilling to describe it as the type of a new genus.

# 49. Paratiquadra, g. n.

(παρά: Tiquadra, nom. gen.)

Type, Paratiquadra forficulella, Wlsm.

Antennæ  $(\frac{2}{3})$ :  $\delta$  serrate beneath, uniciliate; rather stout. Labial palpi rather short, projecting; apical joint much shorter than the second.

Maxillary palpi (broken?). Haustellum rather short.

Head smooth, slightly roughened posteriorly.

Thorax smooth.

Fore wings: costa arched, apex rounded, termen obliquely rounded. Neuration: 12 veins all separate, 7 to apex, 2 from near angle of cell, with an internal vein from between 6 and 7 to between 10 and 11.

Hind wings elongate ovate, evenly rounded from apex; transparent, iridescent; cilia short. Neuration: 8 veins all separate, 2 from end of basal third of cell, 3 remote, 3 and 4 widely separated, 4, 5, 6, and 7 almost parallel, but 5 is slightly curved downwards; an internal vein from between 5 and 6 to base.

Abdomen flat, hairy; anal claspers long and curved inwards and upwards, somewhat resembling the analogous organs in the Forficulidæ.

Legs smooth.

# 150. Paratiquadra forficulella, sp. n.

Antennæ dark brownish fuscous. Palpi whitish grey. Head whitish grey, face paler. Thorax pale fawn brownish. Fore wings pale fawn brownish, a pale whitish-cinereous space along the cell blending with the darker ground-colour towards the tornus, and a similar pale space along the costa nearly to the apex; cilia very pale fawn-brown. Underside pale fawn-brownish, with a large subovate blackish patch extending along the outer half of the cell at its upper edge nearly to the costa, and including the basal two-thirds of veins 8 and 9 as well as the greater portion of vein 10 and the outer part of vein 11. Expl. al. 24 mm. Hind wings transparent, iridescent, bluish grey, margined with a pale shade of fawn-brown; cilia pale fawn-brown. Abdomen clothed with pale

fawn-brown hairs; anal claspers somewhat peculiar, long, curved inwards and upwards in the form of two chitinous processes resembling the analogous organs in the Forficulidæ. Legs pale fawn-brown.

Type, of Mus. Wlsm.

Hab. West Indies—Jamaica (Coll. Ragonot).

The dark patch on the underside of the fore wings is probably a sexual character confined to the  $\delta$ .

## 50. HYPONOMEUTA, Ltr.

[†YPONOMEUTA, Ltr. (1796); ‡HYPONOMEUTA, Sdf. (1837).]

## 151. HYPONOMEUTA MAHALEBELLUS, Gn.

Yponomeuta mahalebella, Gn. Ind. Méth. 105–6 (1845)<sup>1</sup>. Hyponomeuta mahalebellus, Stgr. & Wk. Cat. Lp. Eur. 277. No. 1555 (1871)<sup>2</sup>. Yponomeuta mahalebella, Gn. Ann. Soc. Ent. Fr. (5 s.) 1X. 282 (1879)<sup>3</sup>. Hyponomeuta mahalebellus, Wlsm. Pr. Z. Soc. Lond. 1891, 532, 547 (1892)<sup>4</sup>.

Hab. Europe 1-4, Larva, Cerasus mahaleb 1, 3. West Indies—Cuba 3, 4.

## 152. HYPONOMEUTA TRIANGULARIS, Mschl.

Hyponomeuta triangularis, Mschl. Ab. Senck. Nat. Ges. XV. 339-40, 354 (1890)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 532, 547 (1892)<sup>2</sup>; Hdm. Stett. Ent. Ztg. LVII. 10 (1896)<sup>3</sup>.

Hab. West Indies—Portorico 1,2; St. Thomas, 17 III.3

#### II. PLUTELLINÆ.

# 51. PLUTELLA, Schrk.

# 153. PLUTELLA CRUCIFERARUM, Z.

Plutella cruciferarum, Z. Stett. Ent. Ztg. IV. 281–3 (1843). Plutella xylostella, Stgr. & Wk. Cat. Lp. Eur. 281. No. 1626 (1871). Plutella cruciferarum, Stgr. & Wk. Cat. 425. No. 1626 (1871), &c. &c. Plutella xylostella, Mschl. Ab. Senck. Nat. Ges. XV. 341, 354 (1890) <sup>1</sup>. Plutella cruciferarum, Wlsm. Pr. Z. Soc. Lond. 1891, 518–9, 545 (1892) <sup>2</sup>.

Hab. All regions. West Indies—Portorico 1,2.

It is certainly remarkable that I should not have received specimens of this cosmopolitan species from some of my correspondents!

#### III. GLYPHIPTERYGINÆ.

#### 52. DITRIGONOPHORA.

( $\delta is = \text{doubly} ; \tau \rho i \gamma \omega \nu o \nu = a \text{ triangle} ; \phi o \rho \epsilon \hat{\imath} \nu = \text{to carry.}$ )

Type Ditrigonophora marmoreipennis, Wlsm.

Antennæ (broken).

Labial palpi somewhat longer than the head, slender at the

base, diverging outwards; apical joint shorter than second, both triangularly clothed with appressed scales, giving a truncate appearance.

Head densely clothed above and in front.

Fore wings with the costa slightly arched, apex rounded, termen oblique, dorsum straight. Neuration: 12 veins all separate, 7 to apex.

Hind wings as broad as the fore wings, somewhat trapezoidal.

Neuration: 7 veins all separate.

Abdomen somewhat flattened and laterally dilated. Hind tibiæ somewhat hairv above and beneath.

This genus is founded upon the peculiar shape of the palpi, which differ in form from those of all the genera of Micro-Lepidoptera with which I am acquainted.

## 154. Ditrigonophora marmoreipennis, sp. n.

Antennæ cinereous. Palpi silvery grey above, the second joint shaded and the apical joint doubly barred beneath with brownish fuseous. Head ochreous, mixed with brownish fuseous. Thorax brownish fuseous, transversely banded with whitish. Fore wings pale ochreous, thickly mottled with brownish fuseous, which is separated into ill-defined spots and shades by slender silvery whitish undulating lines; a series of five or six slender silvery white oblique costal streaks, the outer one of the series being in the middle of an elongate brownish-fuseous patch, scarcely more than two-thirds of the wing-length from the base; a slender blackish line, slightly angulated at the apex, runs along the base of the greyish-ochreous cilia. Underside uniformly reddish grey. Expl. al. 5–7 mm. Hind wings and cilia reddish grey. Underside uniformly reddish grey. Abdomen reddish grey. Legs grey with white spurs, the tarsi spotted with white.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 15 III.—H. H. Smith). Two specimens.

These specimens were unfortunately almost destroyed by an

accident.

# 53. Trapeziophora, Wlsm.

# 155. TRAPEZIOPHORA GEMMULA, WISM.

Trapeziophora gemmula, Wlsm. Pr. Z. Soc. Lond. 1891, 530-1, 547, Pl. XLI. 7 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

# 54. GLYPHIPTERYX, Hb.

=  $\cancel{E}$  chmia, Tr. (nec auct.); = Ussara, Wkr.

Curtis, Br. Ent. IV. Pl. 152 (1827), figured and specified *Phalæna linneella*, Cl., as the type of *Glyphipteryx*. If he were quoting *Glyphipteryx* from Hübner's 'Verzeichniss,' he must have been

acquainted with that work very soon after its completion. If "Glyphipteryx, nob." of Curtis were an independent creation, the name could not stand, as it was already preoccupied by Hübner; and if he were restricting Hübner's genus Glyphipteryx, his action was inadmissible, for Glyphipteryx linneella, Hb. Verz. bek. Schm. 4101 (Hb. Tin. 436, Tort. 84), is bergstræsserella, F. (Stgr. Cat. 2306), a totally different insect from linneella, L. and Crt. \*Glyphipteryx, Crt. (nec Hb.), must sink as a synonym of Chrysoclista, Stn.

## 156. GLYPHIPTERYX CAUDATELLA, sp. n.

Antennæ brownish grey. Palpi slender; whitish. Head and thorax shining olive-brown. Fore wings shining olive-brown, with five short white costal streaklets; the first two beyond the middle oblique, tending to converge, emitting a steel-blue line running to the tornus; the third small and straight; the fourth and fifth, before the apex, tending to converge at their extremities, the outer one of the two nearly meeting a short subapical white streak below the dark ocellated apex, which contains a white spot within the circular line running through the cilia and emitting a long uncate dark apical streaklet; on the middle of the dorsum is a conspicuous white outwardly oblique cuneiform dash, its extremity slightly curved over, and before the tornus is a much shorter one, straighter and less conspicuous; cilia pale greyish. Exp. al. 8 mm. Hind wings and cilia greyish brown. Abdomen shining olive-brown. Legs olive-brownish, tarsi spotted and tipped with whitish.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—Grenada (Chantilly Estate, 350 ft.; and Balthazar, 250 ft., windward side, 13-20 IV.—H. H. Smith). Three specimens.

# 157. GLYPHIPTERYX PARADISEA, sp. n.

Antennæ brownish fuscous. Palpi smooth, slender, the second joint about as long as the apical; dirty whitish. Head and thorax brownish fuscous. Fore wings brownish fuscous at the base, richly ornamented beyond; with a broad triangular dorsal patch at onethird, its apex reaching to the upper edge of the cell; a short scarcely oblique steel-blue costal streak a little beyond it terminates on the cell in a space shaded with orange ochreous, which colour also intervenes between it and a second slightly inverted steel-blue costal streak slightly beyond the middle—the upper extremities of these streaks form white spots on the costa; from the middle of the dorsum arises a longer steel-blue streak with lilac reflections, its extremity equidistant between the ends of the costal streaks above it; thence the ground-colour becomes dark greyish fuscous, but is almost entirely superseded by a large brightly decorated patch of black occupying the whole tornal angle—its upper portion consisting of a steel-lilac spot, from which radiating lines of pale ochreous dots traverse the black space, its lower portion with three upright equidistant steel-lilac spots, the first larger than the other two; crossing the apical portion is a strong steel-blue streak reaching the subapical incision on the termen, its costal extremity forming a white spot; beyond it, just before the extreme apex, is an outwardly oblique cuneiform white spot; cilia æneous, with a white spot at the incision. Exp. al. 9-10 mm. Hind wings dark brown, inclining to fuscous; cilia pale grey. Abdomen brownish grey. Legs greyish, with pale tarsal spots.

Type, & Q Mus. Wlsm.

Hab. West Indies—Grenada (La Force Estate, 350 ft.; and Balthazar, 250 ft., windward side, 15 IV.-5 V.—H. H. Smith). Four specimens.

#### 55. Brenthia, Clem.

## 158. Brenthia pavonacella, Clem.

Brenthia pavonacella, Clem. Pr. Ac. Nat. Sc. Phil. XII. 172 (1860) ; Stn. Pr. Ac. Nat. Sc. Phil. XII. 434 (1860) ; Wkr. Cat. Lp. Ins. B. M. XXX. 844 (1864) ; Stn. Tin. N. Am. pp. vii, 37, 41, 134–5 (1872) ; Z. Verh. z.-b. Ges. Wien, XXV. 323–4 (1875) ; Hor. Soc. Ent. Ross. XIII. 174 (1877) . Brenthia pavonicella, Chamb. Bull. U.S. G.G. Surv. IV. 132 (1878) . Brenthia pavonacella, Chamb. Can. Ent X. 76–7 (1878) ; Mschl. Ab. Senck. Nat. Ges. XV. 335, 354 (1890) ; Wlsm. Pr. Z. Soc. Lond. 1891, 529, 547 (1892) 10.

Hab. United States (Pennsylvania, Texas, Kentucky) <sup>1-5,7,5-10</sup>, VI.-VIII <sup>1,4,5,8</sup>. Larva, Amphicarpaa monoica, VI.-VII., IX.<sup>5</sup> Panama—Chiriqui <sup>6,9,10</sup>. West Indies—(Antilles? <sup>6</sup>), Portorico <sup>9,10</sup>. Brazil <sup>5,9,10</sup>.

## 56. GAURIS, Hb.

# 159. GAURIS BIFERANA, WKr.

n. syn. = TRISTIS, F. & R.; n. syn. = CONTUBERNALIS, Z. Gauris biferana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 418 (1863)<sup>1</sup>. Gauris tristis, F. & R. Reise Nov., Lep. Pl. 138. 15 (1875)<sup>2</sup>. Simaethis contubernalis, Z. Hor. Soc. Ent. Ross. XIII. 175-6, Pl. II. 63 (1877)<sup>3</sup>. Gauris biferana, Wlsm. Pr. Z. Soc. Lond. 1891, 529, 546 (1892)<sup>4</sup>.

Hab. West Indies 3—San Domingo 1, 4. Brazil (Amazons) 2.

# 160. GAURIS RIMULALIS, Z.

Simaethis rimulalis, Z. Verh. z.-b. Ges. Wien, XXV. 321 (1875)<sup>1</sup>: Hor. Soc. Ent. Ross. XIII. 174–5, Pl. II. 62 (1877)<sup>2</sup>. Gauris rimulalis, Wlsm. Pr. Z. Soc. Lond. 1891, 529, 546 (1892)<sup>3</sup>. Simaethis rimulalis, Hdm. Stett. Ent. Ztg. LVII. 10 (1896)<sup>4</sup>.

Hab. West Indies—Cuba<sup>2,3</sup>; St. Thomas<sup>1,3,4</sup>, 10 IV.<sup>4</sup>

# 57. Tortyra, Wkr.

TORTYRA, Wkr. Cat. Lp. Ins. B.M. XXVIII. 510 (1863). = Choregia (Z.), F. & R. Reise Nov., Lp. expl. Pl. 140 (1875); Z. Hor. Soc. Ent. Ross. XIII. 191-2 (1877).

## 161. TORTYRA AURIFERALIS, Wkr.

= AUROFASCIANA, Snell. ; = IGNITA, Z.7

Tortyra auriferalis, Wkr. Cat. Lp. Ins. B. M. XXVIII. 510-11 (1863) <sup>1</sup>. Simaethis aurofasciana, Snell. Tijd. v. Ent. XVIII. 73, 74-6, Pl. VI. 7 (1875) <sup>2</sup>. Simaethis (Chordates) aurofasciana, Snell. Tijd. v. Ent. XX. 48-9 (1876) <sup>3</sup>. Choregia ignita, Z. Hor. Soc. Ent. Ross. XIII. 195-6 (1877) <sup>4</sup>. Choregia (Simaethis) aurofasciana, Snell. Tijd. v. Ent. XXVIII. 15 (1885) <sup>5</sup>. Choregia aurofasciana, Mschl. Ab. Senck. Nat. Ges. XV. 335, 354 (1890) <sup>6</sup>. Tortyra auriferalis, Wlsm. Pr. Z. Soc. Lond. 1891, 528-9, 546 (1892) <sup>7</sup>; Hdm. Stett. Ent. Ztg. LVII. 10 (1896) <sup>8</sup>.

Hab. West Indies—Cuba <sup>4,7</sup>; San Domingo <sup>1,7</sup>; Portorico <sup>6,7</sup>; St. Croix <sup>8</sup>, 22 XI. (Pontoppidan); St. Martin <sup>2,6,7</sup>; St. Vincent <sup>7</sup>.

[In my last paper (l. c. No. 7, 529) I suggested that Choregia fulgens, F. & R., was probably a variety. It may therefore be advisable to put on record an account of the life-history of that species. In the Oxford Museum are two specimens of fulgens with the following label attached:—

"Arica, Peru, Kenderdine. Flying in sun about low fig-trees. Larva in the young shoots of the-fig tree, where it changes, spinning a strong white silken cocoon. It is of a dull brownish-red colour with the feet [black?] and a row of small black dots on

each segment, from each of which issues a fine hair."

This note ought to enable collectors in the West Indies to breed *auriferalis*, Wkr., and to prove whether it is distinct or a variety of *fulgens*.

#### VIII. TORTRICIDÆ.

#### I. OLETHREUTINÆ, Hb.

=  $O_{LETHREUTÆ}$ , Hb.; =  $G_{RAPHOLITHINÆ}$ , Fern.; =  $E_{PIBLE-MIDÆ}$ , Meyr.; =  $O_{LETHREUTINÆ}$ , Wlsm. (emend.).

58. BACTRA, Stph.

 $= \S A_{PHELIA}$ , Stph.;  $= L_{EPTIA}$ , Gn.

## 162. BACTRA LANCEOLANA.

Tortrix lancealana, Hb. Sammi. Eur. Schm. VII. (Tort.) Pl. XIII. 80 (1800)<sup>1</sup>. Ancylis lanceolana, Hb. Verz. bek. Schm. 376. No. 3614 (1826)<sup>2</sup>. Aphelia lanceolana, Stgr. & Wk. Cat. Lp. Eur. 251. No. 1006 (1871)<sup>3</sup>, &c. Bactra lanceolana, Fern. Tr. Am. Ent. Soc. X. 28–9. No. 163 (1882)<sup>4</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 501, 543 (1892)<sup>5</sup>.

Hab. Europe <sup>3,5</sup>, Africa <sup>5</sup>, Asia <sup>5</sup>, Australia <sup>5</sup>, New Zealand <sup>5</sup>, United States <sup>4,5</sup>. West Indies—St. Thomas, 22–30 III (Hedemann); St. Vincent <sup>5</sup>; Grenada (windward side—Balthazar, 250 ft., La Force Estate, 350 ft., and Grand Etang, 1900 ft.,

1 IV.-30 V.; leeward side—Mount Gay Estate, 300 ft., 25-30 VIII.—H. H. Smith). S. AMERICA.

I have not thought it necessary to give the full synonymy of

this widely distributed species.

## 59. ENARMONIA, Hb.

Type, Tortrix weberiana, Schiff. (Steph. 1839).

## 163. Enarmonia Jamaicana, sp. n.

Antennæ shortly biciliate, and serrate towards the apex; cinereous. Palpi porrect, extending nearly the length of the head beyond it; pale cinereous, with a darker shade beneath the second and third joints. Head dirty fawn whitish. Thorax dull cinereous, speckled and blotched with hoary whitish. Fore wings dull cinereous, speckled and blotched with hoary whitish; a basal patch, extending a little beyond one-third, throws out an acutely angulated projection above the fold, almost bisecting an outwardly angulated dirty-whitish median fascia, which is separated from the terminal portion of the wing by an angulated band of the same darker ground-colour as the basal patch; this band commences about the middle of the costa in one of a series of about twelve ontwardly oblique costal streaks, it is produced and dilated outwards to the end of the cell, whence it is abruptly bent back to the dorsum, becoming wider in its descent; this is bounded outwardly by a shining silvery whitish line, especially marked before the ocelloid patch, which contains six or seven black transverse lines, and is also terminated on its outer edge by a narrow, shining, silvery band; on the apical portion of the costa a series of pale lines between the dark costal streaks assume a silvery hue, and one of them is produced to the termen below the apex, and at the extreme apex is a dark spot, corresponding in colour with the costal streaklets; eilia mottled greyish cinereous. Exp. al. 14 mm. Hind wings pale greyish brown; cilia whitish cinereous. Abdomen and legs pale cinereous.

Type, & Mus. Wlsm.

Hab. West Indies-Jamaica (Kingston, VI.-Cockerell).

Unique.

This species appears to be nearly allied to *Grapholitha duo-decemstriata*, Wlsm., but is somewhat smaller and has a more pronounced basal patch and fewer dark lines in the occlloid patch.

# 60. Episimus, Wlsm.

Ерівімия, Wlsm. Pr. Z. Soc. Lond. 1891, 501-2, Pl. XLI. 3 a-b (1892).

The following addition should be made to my description of this

genus :--

Thorax smooth;  $\sigma$  and  $\varphi$  with an expansible hair-pencil (arising from a point near the head) below the base of the fore wing. When not expanded this hair-pencil is appressed to the

side of the thorax beneath the wing and may easily be overlooked, but when spread out it is very noticeable, appearing like thistledown at the base of the costa. The occurrence of this character in both sexes may suggest a different train of thought to those who have enunciated various theories to account for the functional utility of such structures hitherto observed in the male sex only.

This observation is founded on the examination of many specimens belonging to several described and undescribed Transatlantic

species.

#### 164. Episimus transferranus, Wkr.

[TRANSFERRANUS, WKr.+TRANSFERRANUS, WKr.

Carpocapsa transferrana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 398 (1863) <sup>1</sup>. Episimus transferrana, Wlsm. Pr. Z. Soc. Lond. 1891, 502, 543 (1892) <sup>2</sup>. Hab. Brazil (Ega) <sup>1, 2</sup>.]

TRANSFERRANUS, Wkr. + VINCENTANUS, Wlsm.

*Episimus transferrana*, Wkr. + *vincentana*, Wlsm. Pr. Z. S. Lond. 1891, 502, 543, Pl. XLI. 3 (1892) <sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

#### 165. Episimus augmentanus, Z.

Grapholitha (Hedya) augmentana, Z. Hor. Soc. Ent. Ross. XIII. 160–1 (1877)<sup>1</sup>. Episimus augmentana, Wlsm. Pr. Z. Soc. Lond. 1891, 502, 543 (1892)<sup>2</sup>.

Hab. West Indies—Cuba 1,2; Grenada (Balthazar, 250 ft., windward side, 20 IV.—H. H. Smith).

# 166. Episimus nesiotes, sp. n.

Antennæ: 3, stout, slightly pubescent; bone-colour, with a rufous tinge towards the base. Palpi somewhat club-shaped, the apical joint scarcely visible; bone-white on their inner sides, rnfous externally. Head reddish ochreous; face rufous, a transverse whitish band between the eyes. Thorax whitish, anteriorly margined with reddish brown. Fore wings mottled with reddish brown and bone-white with some admixture of blinsh grey; the bone-white is especially noticeable in a large elongate dorsal patch extending to the fold, transversely barred and thus almost obliterated on the basal half; it is also noticeable in a series of short outwardly oblique costal streaks, and at the outer end of the cell in an inwardly curved line of which the lower extremity reaches the upper angle of the somewhat indistinct ocelloid patch (containing two black dots set in rosy-white preceded by a steel-grey shade); some oblique slender steel-grey lines extend outwards from the lower extremities of the pale costal streaks: cilia reddish brown mixed with bone-grey. Exp. al. 3 14 mm., \$\Q2\$ 17 mm. Hind wings shining brownish grey, with somewhat paler cilia. Abdomen brownish grey. Legs bone-whitish.

Type, ♂ ♀ Mus. Wlsm.

Hab. West Indies—St. Croix, 4 V.-15 VI. (Gudmann, Hede-

mann, Pontoppidan).

"Die 16-füssige Raupe lebt auf Euphorbia huperifolia zwischen zusammengesponnenen Blättern; sie ist cylindrisch, zwischen den Leibsegmenten stark eingeschnürt, die Grundfarbe gelbgrün, auf dem ersten Segment mit vier kleinen rothen Punkten, auf allen übrigen Segmenten je ein rother Gürtel ringsum das Segment in welchem die rothen Punkte etwas dunkler erscheinen und mit feinen Haaren besetzt; Kopf herzförmig, gelbbraun, die Mundtheile etwas dunkler; Füsse und Aftersegment unbezeichnet." (Gudmann.)

Closely allied to argutanus, Clem., but differing in the distinctly

apparent dorsal patch and in its paler hind wings.

## 167. Episimus argutanus, Clem.

# = ALLUTANA, Z.

Bactra? argutana, Clem. Pr. Ac. Nat. Sc. Phil. XII. 358 (1860)<sup>1</sup>. Grapholitha (Hedya) allutana, Z. Verh. z.-b. Ges. Wien, XXV. 295-6, Pl. IX. 27 (1875)<sup>2</sup>. Bactra? argutana, Pack. U.S. Dept. Intr. (Ent. Com.), Bull. VII. 69 (1881)<sup>3</sup>. Semasia argutana, Fern. Tr. Am. Ent. Soc. X. 45. No. 319 (1882)<sup>4</sup>. Bactra? argutana, Pack. U.S. Dept. Agr., Rp. V. 282 (1890)<sup>5</sup>. Semasia argutana, Pack. U.S. Dept. Agr., Rp. V. 668 (1890)<sup>6</sup>; Mft. Can. Ent. XXIII. 168 (1891)<sup>7</sup>.

Hab. Canada<sup>7</sup>; United States <sup>1-6</sup>, 9-26 VII.<sup>2</sup> Larva, Hamamelis virginica<sup>1,3-6</sup>; Rhus glabra<sup>1,3-5</sup>; Cratægus tomentosa<sup>1,3-5</sup>; Ulmus<sup>1,3-5</sup>. West Indies—St. Croix, 4 V.-15 VI. (Hedemann, Pontoppidan); St. Thomas, 18 III. (larva Euphorbia sp.?, Gudmann); St. Lucia (Point Michell, 25 V.); Grenada (Balthazar, 250 ft., windward side, 15-27 IV.—H. H. Smith).

Mr. Gudmann's specimen is labelled as bred, but the name of the food-plant is not indicated. Baron von Hedemann informs me that it was bred from a species of *Euphorbia*, but his note may

possibly have referred to nesiotes.

# 168. Episimus submicans, sp. n.

Antennæ fawn-brown. Palpi rough, apical joint depressed, short, partly concealed; greyish-fawn. Head fawn-ochreous. Thorax fawn-brown; underside shining silvery white. Fore wings whitish cinereous, mottled and blotched with umber-brown mixed with fuscous; basal patch scarcely indicated, but traceable by two dark costal spots with smaller ones between them, by a small dark umber-brown patch resting on the fold, and by another nearer to the base beneath the fold; a broad triangular costal patch commencing before and extending beyond the middle is composed of dark umber-brown with fuscous lines running through it, a band of rather shining steel-grey dividing it into two parts obliquely, this patch is diffused and produced irregularly to the fold, above

which it is somewhat dilated; the apical portion of the wing contains two umber-brown costal streaks, the first of which sends out a narrow chestnut-brown line to the termen beneath the apex, the apex itself being dark umber-brown mixed with fuscous scales; an obliquely ascending patch of the same colour, also narrowly dark-margined, rests at its base on the lower half of the termen; an umber-brown patch within the tornus is preceded and followed by a silvery-grey space; cilia rich chestnut-brown along their base, their extremities being dark fuscous. Exp. al. 14-16 mm. Hind wings greyish brown; cilia paler, shaded along their base. Abdomen greyish brown. Legs whitish cinereous; hind tibiæ with a tuft of hairs beneath (on their inner sides, along their anterior half); middle femora shining white.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward

side, 15 III.-20 IV.: nine specimens.—H. H. Smith).

This species varies considerably in the colour of the fore wings, in some specimens assuming a rich reddish brown (almost ferraginous) tint, the thorax matching the colour of the basal half of the wing.

## 61. CACOCHARIS, WISM.

## 169. CACOCHARIS ALBIMACULA, WISM.

Cacocharis albimacula, Wlsm. Pr. Z. Soc. Lond, 1891, 503-4, 543, Pl. XLI. 4 (1892) 1.

Hab. Brazil <sup>1</sup> (Ceara, VIII.—Leech, Mus. Wlsm.). West Indies—St, Vincent <sup>1</sup>.

# 62. ANCYLIS, Hb.

# = Phoxopteris, Tr.; = Phoxopteryx, Sdf.

# 170. ANCYLIS VIRIDIDORSANA, Mschl.

Phoxopteryx virididorsana, Mschl. Ab. Senck. Nat. Ges. XV. 334, 354 (1890)<sup>1</sup>. Phoxopteris virididorsana, Wlsm. Pr. Z. Soc. Lond. 1891, 504, 543 (1892)<sup>2</sup>.

Hab. West Indies-Portorico 1, 2.

# 63. Тніодіа, Нь.

Type, Tortrix citrana, Hb. (Stph.).

THIODIA, Hb. Verz. bek. Schm. 391 (1826); Stph. List Br. An. B.M. X. Lp. 63 (1852).

= \*Cydia (Hb. partim), Meyr. HB. Br. Lp. 482-3 (1895) (nec Stph.).

= Semasia, Stgr. & Wk. Cat. (partim); Fern.

Hübner proposed *Thiodia* for his two species *citrana* and *sulphurana* (=rhododendronalis, Dp.); and Stephens in 1852 constituted *citrana* the type. The name *Cydia* cannot be employed for this genus, as its type is *Tinea pomonella*, L. (vide p. 130).

## 171. THIODIA AUTOCHTHONES, sp. n.

Antennæ and palpi mouse-grey, the latter slightly paler. Head and thorax mouse-grey. Fore wings mouse-grey, with a series of oblique geminated white-grey costal streaks terminating in an inverted spot of the same colour before the apex; on the outer half these streaks are produced outwards in leaden-grey lines extending to the margin of the ochreous ocellated patch, which is bounded by a leaden-grey patch on its inner side, and on its outer by a less wide white-grey subovate spot lying between it and the termen, which is also ochreous throughout bounded by a slender dark line at the base of the cilia, which are slightly indented below the apex; the ocelloid patch contains two black dots; about the middle of the dorsum arises an inconspicuous leaden-grey patch, and the surface of the wing between the markings above described is minutely speckled with ochreous and fuscous scales; cilia shining leaden grey. Exp. al. 8 mm. Hind wings brownish grey, with a slight greenish iridescence in certain lights; cilia whitish grey, divided by a slight shade-line near their base. Abdomen leaden grey, with two darker cross-bands near the base; anal tuft paler. Legs shining leaden grey.

Type, ♂ Mus. Hedemann; ♀ Mus. Wlsm.

Hab. West Indies—St. Croix, 30 IV.—27 V. (Gudmann, Hedemann, Pontoppidan); St. Thomas, 10–18 IV. (Gudmann, Hedemann). Six specimens.

## 64. Eucosma, Hb.

# Type, Eucosma circulana, Hb.

Eucosma, Hb. Zutr. II. 28. figs. 363-4 (1823): Verz. bek. Schm. 374 (1826); Wkr. Cat. Lp. Ins. B.M. XXVIII. 423 (1863) [пес Меуг. НВ. Вг. Lp. 457-8 (1895)]; = Сальтмовема, Clem. Pr. Ent. Soc. Phil. V. 140-1. fig. 9 (1865).

= Epiblema, Hb. Verz. bek. Schm. 375-6 (1826); Stph. Ill. Br. Ent., Haust. IV. 92-3 (1834), 418 (1835): List Br. An. B.M., X. Lp. 46-7 (1852); Meyr. HB. Br. Lp. 490 (1895). Type, Tinea fænella, L. (Stph.).

= Pædisca, Tr. Schm. Eur. VIII. 188 (1830); Dp. Hist. Nat. Lp. Fr. IX. 22-3 (1834); Hein.; Stgr. & Wk.; Fern. &c. Type, Tortrix solandriana, L. (Dp.).

# 172. EUCOSMA LONGIPALPANA, Mschl.

Grapholitha (Pædisca) longipalpana, Mschl. Ab. Senck. Nat. Ges. XV. 333, 354 (1890) <sup>1</sup>. Pædisca longipalpana, Wlsm. Pr. Z. Soc. Lond. 1891, 506, 544 (1892) <sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

# 173. Eucosma strenuana, Wkr.

= EXVAGANA, Wkr. 5; = FLAVOCELLANA, Clem. 6; = SUBVER-SANA, Z. 6

Grapholita strenuana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 383

(1863)<sup>1</sup>. Grapholita exvagana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 383–4 (1863)<sup>2</sup>. Steganoptycha flavocellana, Clem. Pr. Ent. Soc. Phil. V. 138 (1865)<sup>3</sup>. Grapholitha subversana, Z. Verh. z.-b. Ges. Wien, XXV. 318–9 (1875)<sup>4</sup>. Pædisca strenuana, Wlsm. Ill. Lp. Het. B.M. IV. 52, Pl. LXXII. 4 (1879)<sup>5</sup>; Fern. Tr. Am. Ent. Soc. X. 40. No. 278 (1882)<sup>6</sup>.

Hab. NORTH AMERICA<sup>1, 2, 5</sup>—UNITED STATES<sup>3, 4, 6</sup>, 27 VI.—3 VII.<sup>4</sup> [larva, Ambrosia<sup>6</sup>]. West Indies—San Domingo (Puerto Plata, 16 V.—Gudmann).

## 65. CROCIDOSEMA, Z.

## 174. CROCIDOSEMA PLEBEIANA, Z.

=ALTHEANA, Mn. 15; (=LAVATERANA, Mill. 8; =PEREGRI-NANA, Mschl. 8).

Crocidosema plebejana, Z. Is. 1847, 721–2<sup>1</sup>. Penthina altheana, Mn. Verh. z.-b. Ges. Wien, V. 555–6 (1855)<sup>2</sup>. Grapholitha altheana, Ld. Wien. Ent. Mts. III. 343 (1859)<sup>3</sup>. Crocidosema plebejana, Ld. Wien. Ent. Mts. III. 367 (1859)<sup>4</sup>. Pædisca lavaterana, Mill. Ic. I. 290–3, Pl. XXXIV. 9–13 (1863)<sup>5</sup>. Steganoptycha altheana, Hein. Schm. Deutsch. Tort. 241 (1863)<sup>6</sup>. Grapholitha peregrinana, Mschl. Berl. Ent. Zts. X. 139–40 (1866)<sup>7</sup>. Steganoptycha altheana, Stgr. & Wk. Cat. 260. No. 1221 (1871)<sup>8</sup>. Crocidosema plebejana, Stgr. & Wk. Cat. 263. No. 1269 (1871)<sup>3</sup>. Steganoptycha altheana, Mill. Cat. Lp. Alp. Mar. 290 (1875)<sup>10</sup>. Hrtm. MT. Münch. Ent. Ver. III. 191. No. 1221 (1879)<sup>11</sup>. Crocidosema plebeiana, Meyr. Pr. Lin. Soc. N.S.W. VI. 659–60 (1881)<sup>12</sup>. Steganoptycha altheana, M.-P. & F.-T. Nat. Sic. VIII. 158 (1889)<sup>13</sup>. Crocidosema plebeiana, Wlsm. Pr. Z. Soc. Lond. 1891, 506, 544 (1892)<sup>14</sup>; Rag. Ann. Soc. Ent. Fr. LXIII. 221. No. 1221 (1894)<sup>15</sup>.

Hab. Europe <sup>1-15</sup>.[larva, Althea rosea <sup>2,6,11,12</sup>; Lavatera arborea <sup>5,11,12</sup>, IX.-II.<sup>11</sup>; Imago, II.-V.<sup>11</sup>, IX.<sup>2,6</sup>]. Australia, XII.-III., VII.<sup>12,14</sup>. West Indies—St. Croix, 5-31 V. (Hedemann, Pontoppidan); St. Thomas, 18-23 III. (Gudmann); St. Vincent <sup>14</sup>; Grenada (windward side—Balthazar, 250 ft., La Force Estate, 350 ft., and Chantilly Estate, 350 ft., 30 III.-4 V.; leeward side—Mount Gay Estate, 300 ft., 1-5 X., H. H. Smith). Bred by Mr. Gudmann, but the plant not identified. Brazil <sup>14</sup>; Peru <sup>14</sup>; Argentine Republic <sup>14</sup>.

# 66. Strepsicrates, Meyr.

§ Strepsiceros, Meyr. Pr. Linn. Soc. N. S. W. VI. 678-9 (1882). Strepsicrates, Meyr. Tr. N. Z. Inst. XX. 73 (1887).

# 175. STREPSICRATES SMITHIANA, WISM.

Strepsicrates smithiana, Wlsm. Pr. Z. Soc. Lond. 1891, 506-7, 544 (1892) <sup>1</sup>.

Hab. West Indies—St. Croix, 9 V. (Hedemann); Dominica 1';

St. Lucia (Point Michell, Castle Bruce, 15 II., 30 IX.); St. Vincent<sup>1</sup>; Grenada (Balthazar, 250 ft., windward side, 5-20 IV.—

H. H. Smith).

Baron von Hedemann observes that this species was bred by Mr. Gudmann, but does not mention the name of the plant. No specimen was included in the collection sent to me by Mr. Gudmann.

# 67. Balbis, g. n.

(βαλβίs=a starting point.)

Type, Carpocapsa assumptana, Wkr.

Antennæ less than  $\frac{2}{3}$ , stout, simple.

Palpi porrect; second joint slightly curved, moderately clothed; apical joint blunt, exposed, projecting forward.

Haustellum short.

Head roughly clothed above.

Thorax smooth, with hair-pencil arising beneath base of costa

(appressed to side, but probably expansible, as in *Episimus*).

Fore wings, of without a costal fold; costa slightly arched at base, somewhat straight beyond, thence rounded to the depressed apex, termen not sinuate, tornus rounded. Neuration: 12 veins, all separate; 2 from before three-fourths, 7 to termen.

Hind wings evenly rounded, not sinuate beneath apex. Neuration: 8 veins; 6 and 7 remote at origin, parallel; 8 approximated to radius; 3 and 4 connate; 5 almost straight, but somewhat

approximated to 4.

Legs, hind tibiæ smooth.

Agreeing with Dichrorampha and Lipoptycha in having 6 and 7 of the hind wings parallel, but differing in the palpi and in the unsinuate termen, and probably intermediate between these genera and Laspeyresia, Hb. (= Grapholitha, HS.).

# 176. Balbis assumptana, Wkr.

Carpocapsa assumptana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 406 (1863) 1.

Hab. Brazil (Ega) 1. West Indies—Grenada (Grand Etang, 1900 ft., windward side, 30 V.—H. H. Smith).

# 177. BALBIS ALBICAPITANA, WISM.

Coptoloma? albicapitana, Wlsm. Pr. Z. Soc. Lond. 1891, 505-6, 544 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

# 178. Balbis? Livens, Wlsm.

Grapholitha livens, Wlsm. Pr. Z. Soc. Lond. 1891, 504-5, 543 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

This species is probably rightly referred to this genus, but the type was headless when received.

#### 179. Balbis figurana, Z.

Grapholitha (Coptoloma?) figurana, Z. Hor. Soc. Ent. Ross. XIII. 163–5, Pl. II. 55 (1877)<sup>1</sup>. Coptoloma? figurana, Wlsm. Pr. Z. Soc. Lond. 1891, 505, 544 (1892)<sup>2</sup>.

Hab. West Indies—St. Thomas 1,2, 17 XII.1, 18 IV. (one specimen, Gudmann).

## 180. BALBIS? EXCITANA, Mschl.

Grapholitha excitana, Mschl. Ab. Senck. Nat. Ges. XV. 333-4, 354 (1891) <sup>1</sup>. Grapholitha? excitana, Wlsm. Pr. Z. Soc. Lond. 1891, 505, 543 (1892) <sup>2</sup>.

Hab. West Indies—Portorico 1,2.

I am unacquainted with this species, but it probably belongs here, as the genus to which Möschler referred it does not appear to occur in the West Indies.

## 68. Eucelis, Hb.

Type, Pyralis aurana, F. (Hb.).

EUCELIS, Hb. Verz. bek. Schm. 394 (1826); = Trycheris, Gn. Ind. Méth. 56 (1845), vide Wlsm. Tr. Ent. Soc. Lond. 1895, 516-7.

=\*Epinotia, Meyr. (nec Hb.) HB. Br. Lp. 516 (1895).

In 1834 Stephens constituted *Pædisca simulana*, Hb., the type of *Epinotia*, and Meyrick's genus does not contain any of Hübner's types.

181. Eucelis? Lustromarginata, sp. n.

Antennæ stone-grey. Head and palpi stone-ochreous. Fore wings stone-colour, transversely striated with brownish fuscous, giving the whole wing a speckled and streaked appearance; among many more slender lines two may be especially distinguished, although both broken and ill-defined, the first commencing on the costa at one-third from the base, angulated outwards above the middle and reverting to the dorsum almost at a right angle; the second commencing on the middle of the costa, also outwardly rectangular above the middle, nearly parallel with the first, but slightly diverging toward the dorsum, which it reaches before the commencement of the cilia; between these lines is a lustrous steelgrey sheen above the middle; a series of geminated white streaklets along the costa, with some lustrous lines and a row of 4 or 5 black spots along the termen, the upper one being at the apex; cilia shining steel-grey. Exp. al. 9 mm. Hind wings greyish fuscous, strongly iridescent in certain lights; cilia shining steelgrey. (Underside of both wings brilliantly iridescent.) Abdomen grey. Legs greyish.

Type, Q Mus. Gudmann.

Hab. West Indies—St. Croix, 4 V. (Hedemann). Unique. In the absence of the male this species cannot be referred with

certainty to the genus Eucelis, and it differs from the type in having veins 3 and 4 of the hind wings coincident.

## 69. CYDIA, Hb.

Type, Tinea pomonella, L. (Stph.).

CYDIA, Hb. Verz. bek. Schm. 375 (1826); Stph. Ill. Br. Ent., Haust. IV. 119 (1834), 418 (1835).

=  $C_{ARPOCAPSA}$ , Tr. Schm. Eur. VII. 231 (1829); Hein.; Stgr. & Wk. Cat.; Meyr. &c.

Hübner proposed the genus Cydia for the three species pomonella, L. (=pomonana, Hb.), aspidiscana, Hb., and hohenwartiana (Schiff.), Tr. (=monetulana, Hb.). Treitschke (Schm. Eur. VII. 231 [1829]) placed pomonella in his genus Carpocapsa, and (l. c. 232) aspidiscana and hohenwartiana in Grapholitha, Tr. One of these two genera must fall as a synonym of Cydia. Stephens (Ill. Br. Ent., Haust. IV. 119 [1834]), writing under the heading Carpocapsa, said: - "The three first species" (i.e. pomonella, splendana, and grossana) "form the true Carpocapsæ of Treitschke—Cydia of Hübner." The only species common to Hübner and Stephens, and which consequently was regarded as Hübner's type, is pomonella, L. Stephens [l. c. 119-20 (1834), 418 (1835) under Cydia includes both pomonella and aspidiscana; but he had already indicated that he did not regard aspidiscana as the type, and in List Br. An. B.M. X. Lp. 54 (1852), pomonella appears as the sole type of Cydia, the subsequent reference of aspidiscana to Cydia (l. c. 93) is ruled out, pomonella having already been constituted the type.

# 182. CYDIA? FLAVICOLLIS, sp. n.

Antennæ stone-grey. Palpi projecting slightly beyond the head. of uniform thickness throughout, the second joint not brush-like; canary-yellow. Head and face canary-yellow. Thorax stone-grey, anteriorly with a lilac iridescence extending over the tegulæ. Fore wings stone-grey, with a slight lilac tinge along the costa nearly to its middle, beyond the middle obliquely banded with tawny fuscous and white, the latter appearing in about six wedgeshaped streaks of which the outer one is curved to the termen, reaching a slight indentation below the apex; an elongate tawny fuscous patch stands erect a little beyond the middle of the dorsum, its inner edge pale-margined; it is terminated at its upper extremity by two short ochreous lines, which separate it at the upper edge of the cell from the first oblique costal shade; beyond this erect patch the lower two-thirds of the wing-surface are transversely streaked with silvery metallic, preceding a triangular patch of reddish ferruginous, extending upwards from the tornus along the termen, and slightly tinging the extreme apex; cilia shining silvery-grey. Underside strongly iridescent, with five white costal streaks showing through. Exp. al. 15 mm. Hind wings brownish fuscous; cilia pale bluish grey. Underside strongly iridescent. Abdomen dark leaden grev. Legs bone-whitish, tarsal joints banded with fuscous.

Type, Q Mus. Hedemann.

Hab. West Indies—St. Thomas, 9 III. (Hedemann). Unique. Though I have little doubt that this species belongs to the genus Cydia, it cannot be referred there with certainty in the absence of the male.

## 70. HELIGMOCERA, Wlsm.

#### 183. Heligmocera calvifrons, Wlsm.

Heligmocera calvifrons, Wlsm. Pr. Z. Soc. Lond. 1891, 508, 544, Pl. XLI. 5 a-d (1892) 1.

Hab. West Indies—St. VINCENT<sup>1</sup>; Grenada (Balthazar, 250 ft., windward side, 15 III.—8 V.—H. H. Smith).

#### II. TORTRICINÆ.

## 71. OXYGRAPHA, Hb.

§ Peronea, Crt. Br. Ent. I. expl. Pl. XVI. (1825). Type, Pyralis cristana, F. (Crt.).

†Oxigrapha, Hb. Verz. bek. Schm. 386 (1826). Type, Tortrix literana, L. (Hb.).

‡Охудгарна, Wilk. Br. Tortr. 160 (1859).

Teras, Hein.; Stgr. & Wk. Cat.; Fern. &c. (nec Tr.+Dp.). Acalla, Meyr. HB. Br. Lp. 519-20 (1895) (nec Hb.+Stph.).

Peronea, Crt., is the oldest name for the genus, but it is too close to Peronea, Poli, 1795. Oxigrapha, Hb. (corrected to Oxygrapha by Wilkinson), was monotypical from its publication, and should therefore be chosen in preference to any other name proposed for species of this genus by Hübner. Teras, Tr., is synonymous with Rhacodia, Hb., its type being caudana, F., following Curtis (1831) and Duponchel (1834), the latter citing the type. The type of Acalla, Hb., was fixed as Tortrix opththalmicana, Hb. (a Pædisca), by Stephens in 1834 (vide Ill. IV. 141).

The three following species differ from the type in having 3 and 4 of the fore wings stalked and 3 and 4 of the hind wings coincident; at present I am unwilling to separate them generically from Oxygrapha.

# 184. Oxygrapha negans, sp. n.

Antennæ brownish. Palpi short, suberect, apical joint exposed, second joint loosely clothed; rusty brownish. Head rust-brown. Thorax olive-grey with a greenish tinge. Fore wings olive-grey with a greenish tinge, the costa shining pale bronzy-brown throughout, the termen and cilia the same; an oblique series of raised fuscous scales extends from the costa before the middle in a slightly outwardly bowed line towards the middle of the dorsum; this is followed beyond the middle by ill-defined, scarcely visible, parallel lines of pale brown (not iridescent, but appearing only in certain lights). Exp. al. 16 mm. Hind wings trapezoidal; umberbrown, with a pale line along the base of the umber-brown cilia,

which are grey on their outer half. Abdomen umber-brown. Legs cinereous.

Type, ♀ Mus. Gudmann.

Hab. West Indies—Harti (Port-au-Prince, 22 V.—Gudmann).
One specimen.

# 185. Oxygrapha monochroma, sp. n.

Antennæ fuscous. Palpi suberect, apical joint exposed; reddish brown, slightly paler than the colour of the head. Head reddish brown. Thorax brownish fuscous: underside pale cinereous. Fore wings reddish brown, with slightly paler mottlings on the outer half, and a slight shining greyish shade preceded by a slender ferruginous line before the termen; cilia reddish brown. Exp. al. 12 mm. Hind wings dark fuscous. Abdomen dark fuscous: underside pale cinereous. Legs cinereous shaded with fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—Harti (Port-au-Prince, 22-24 V.—Gud-mann). Two specimens.

## 186. Oxygrapha rotundipennis, sp. n.

Antennee cinereous. Palpi projecting less than the length of the head beyond it; dusky cinereous. Head cinereous. Thorax tawny cinereous. Fore wings abruptly arched near the base, of approximately even width throughout, the apex and termen evenly rounded, the costa roughened from base to apex; tawny reddish, with a faintly indicated oblique greyish-fuscous shade from before the middle of the costa, extending to the lower edge of the cell; a similar curved shade before the apex; waved lines of sublustrous scales are visible on the outer half of the wing in certain lights; a small black dot at the end of the cell; cilia shining reddish grey. Exp. al. of 10,  $\mathfrak P$  11 mm. Hind wings trapezoidal; greyish fuscous; cilia very long and slightly paler. Abdomen greyish fuscous. Legs whitish ochreous.

Type, ♂ Mus. Wlsm.; Q Mus. Hedemann.

Hab. West Indies—St. Thomas, 8-22 III. (Gudmann, Hedemann). Three specimens.

"The larva feeds on Acacia arabica, joining two leaves together,

between which it lives as in a sort of case" (Hedemann).

In the male the colour of the fore wings is dull fawn ochreous, the tawny gloss almost entirely confined to the two darker markings, which are much more conspicuous than in the female. The antennæ are slightly serrate and pubescent beneath.

# 72. Apinoglossa, Mschl. & Saalm.

# 187. Apinoglossa comburana, Mschl.

Apinoglossa comburana, Mschl. Ab. Senck. Nat. Ges. XV. 331, 354 (1894)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 496, 543 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1,2,

## 73. TORTRIX, L.

188. Tortrix? effetana, Mschl.

Tortrix effectana, Mschl. Ab. Senck. Nat. Ges. XV. 330, 354 (1890)<sup>1</sup>. Tortrix? effectana, Wlsm. Pr. Z. Soc. Lond. 1891, 497, 543 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

189. TORTRIX? INSIGNITANA, Mschl.

Tortrix insignitana, Mschl. Ab. Senck. Nat. Ges. XV. 330-1, 354 (1890)<sup>1</sup>. Tortrix? insignitana, Wlsm. Pr. Z. Soc. Lond. 1891, 497, 543 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

## 74. ARCHIPS, Hb.

Type, Tortrix piceana, L. (Hb.).

ARCHIPS, Hb. Tent. (1806).

= CACŒCIA, Hb. Verz. bek. Schm. 388 (1826); Hein., Stgr. & Wk., Fern., Meyr., &c.

## 190. Archips Jamaicana, Wkr.

Teras jamaicana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 291 (1863)<sup>1</sup>. Caccecia jamaicana, Wlsm. Pr. Z. Soc. Lond. 1891, 497, 543 (1892)<sup>2</sup>.

Hab. West Indies—JAMAICA 1, 2.

# 75. PTYCHAMORBIA, Wlsm.

191. PTYCHAMORBIA CATENANA, WISM.

Ptychamorbia catenana, Wlsm. Pr. Z. Soc. Lond. 1891, 498-9, 543 (1892) <sup>1</sup>.

Hab. West Indies—St. VINCENT<sup>1</sup>; GRENADA (La Force Estate, 350 ft., windward side, 5 V.—H. H. Smith). Brazil—Espiritu Santo<sup>1</sup>, Santa Catherina (Mus. Wlsm.).

The specimen from Grenada is a male, and confirms my conjecture that it would only possess eleven veins in the fore wings. It differs, however, from exustana in not having a mat of scales on the basal portion of the antennæ. I have also received both sexes from Santa Catherina.

# 76. CERATORRHINETA, Z.

(† CERORRHINETA, Z.; ‡CERATORRHINETA, Wlsm.)

# 192. Ceratorrhineta calidana, Z.

Cerorrhineta calidana, Z. Hor. Soc. Ent. Ross. XIII. 116-7 (1877)<sup>1</sup>. Ceratorrhineta calidana, Wlsm. Pr. Z. Soc. Lond. 1891, 500, 543, Pl. XLI. 2 a-e (1892)<sup>2</sup>.

Hab. West Indies—Cuba 1-2.

## 77. PLATYNOTA, Clem.

# 193. PLATYNOTA FLAVEDANA, Clem.

= concursana, Wkr. ; = Laterana, Rbs. 5

Platynota flavedana, Clem. Pr. Ac. Nat. Sc. Phil. XII. 348  $(1860)^4$ . Tortrix concursana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 324–5  $(1863)^2$ . Tortrix flavedana, Rbs. Tr. Am. Ent. Soc. II. 278, Pl. VI. 55, 3  $(1869)^3$ . Tortrix laterana, Rbs. Tr. Am. Ent. Soc. II. 278, Pl. VI. 56, 2  $(1869)^4$ . Tortrix (Platynota) flavedana, Z. Verh. z.-b. Ges. Wien, XXV. 236-7  $(1875)^5$ . Platynota flavedana, Wlsm. Ill. Typ. Lep. Het. B.M. IV. 11  $(1879)^6$ ; Fern. Tr. Am. Ent. Soc. X. 22. No. 113  $(1882)^7$ ; Pack. U.S. Dept. Agr., Rp. V. 425, 651  $(1890)^8$ .

Hab. United States 1-8, 15-18 VII. <sup>5</sup> [Larva, Clover <sup>7</sup>, Rosa <sup>7</sup>, Sassafras officinale <sup>7,8</sup>, Acer <sup>7,8</sup>]. West Indies—Hayti (Port-au-Prince, 25 V.—Gudmann); St. Thomas, 10 IV. (Gudmann).

This species has a long costal fold.

## 194. PLATYNOTA REPANDANA, Wkr.

Teras repandana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 292 (1863)<sup>1</sup>. Platynota repandana, Wlsm. Pr. Z. Soc. Lond. 1891, 499, 543 (1892)<sup>2</sup>.

Hab. West Indies—San Domingo 1, 2. This species has a long, straight, costal fold.

# 195. PLATYNOTA ROSTRANA, Wkr.

= RESTITUTANA, Wkr. 4; = CONNEXANA, Wkr. 4

Teras rostrana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 290 (1863) <sup>1</sup>. Teras restitutana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 292 (1863) <sup>2</sup>. Teras connevana, Wkr. Cat. Lp. Ins. B.M. XXVIII. 293 (1863) <sup>3</sup>. Platynota rostrana, Wlsm. Ill. Typ. Lp. Het. B.M. IV. 5-6, Pl. LXII. 1 (1879) <sup>4</sup>. Tortrix rostrana, Cmstk. U.S. Dept. Agr., Rp. Ent. 1880, 253 (1881) <sup>5</sup>. Platynota rostrana, Fern. Tr. Am. Ent. Soc. X. 22. No. 114 (1882) <sup>6</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 499, 543 (1892) <sup>7</sup>.

Hab. United States 1,4—Florida 5,6.7 [Larva, Orange 5,6.7. 31 I.-II.<sup>5</sup>; 17 V.<sup>5</sup>] West Indies—San Domingo 1,2,4,6.7; St. Vincent<sup>7</sup>; Grenada (Balthazar, 250 ft., and La Force Estate, 350 ft., windward side, 15 III.-5 V.—H. H. Smith). Venezuela 3,6.7; Brazil (Ega) 1,4,7.

Walker's three species are represented by females indistinguishable from each other, and until male topotypes have been obtained it will be impossible to determine whether they represent one or more species—probably each matches a male of the flavedana group occurring with it. I referred the St. Vincent specimens (both females) to rostrana with some diffidence, and the reception of both sexes from Grenada only does not enable me to clear up the synonymy as confidently as I should desire. The males from

Grenada have a short fold and much resemble labiosana, Z., but are smaller.

## 196. PLATYNOTA BREVIPLICANA, sp. n.

Antennæ dark brown. Palpi brownish ochreous. Head and thorax brownish ochreous. Fore wings with a short brownishochreous basal patch, somewhat indented on the fold; the costal fold in the male not extending beyond this pale patch, which reaches only to one-fourth the wing-length (in the more northern species flavedana, Clem., it extends to half the wing-length); the whole of the middle portion of the wing is overclouded by a broad dark umber-brown band, beyond which the terminal portion is shining whitish ochreous with two sinuate lines of slightly raised scales; there are also some raised scales on the dark central band, notably in an oblique line from its upper and inner angle ending in a strong patch near the outer end of the fold and in a small patch at the outer end of the cell; cilia pale cinnamon-brown on their basal, brownish ochreous on their outer half. Exp. al. 15 mm. Hind wings cinnamon-brown, blending to ochreous towards the base; cilia shining pale cinnamon-brown. Abdomen cinnamonbrown. Legs brownish ochreous.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 15-20 IV.—H. H. Smith). Two specimens.

## 197. Platynota diminutana, sp. n.

Antennæ dark greyish brown. Palpi somewhat curved downwards; apical joint less than half the length of the second; greybrown. Head and thorax rust-brown. Fore wings: male with a short costal fold extending to one-fourth; rust-brown, with a broad central band, thickly mottled with purplish fuscous in which is an oblique line of raised scales ending on the fold, and a second line, shorter and more oblique, from beyond the middle of the costa where it is accompanied by a dark patch; a small patch of dark fuscous scales lies near the base of the dorsum; cilia ferruginous brown on their basal half, pale ochreous on their outer half. Exp. al. 14 mm. Hind wings cinnamon-brown, tending to ochreous towards the base; cilia shining pale cinnamon-brown. Abdomen brownish ochreous. Legs pale ochreous.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward

side, 15 IV.—H. H. Smith). Two specimens.

This species differs from breviplicana in the more broken or mottled appearance of the central band, which almost assumes the form of an oblique fascia followed by a costal patch, and in the darker ferruginous terminal portion of the wing. It is quite conceivable that it may be a variety of breviplicana, but I am strongly inclined to regard it as distinct in the absence of intermediate forms. Except in the colour of the hind wings it approaches somewhat closely the Mexican species stultana, Wlsm.

#### 78. Cœlostathma, Clem.

Type, Coelostathma discopunctata, Clem. (Clem.).

Celostathma, Clem. Pr. Ac. Nat. Sc. Phil. XII. 355 (1860). =\*Amphisa, Fern. Tr. Am. Ent. Soc. X. 22 (1882), nec Crt.

I cannot agree with Professor Fernald in sinking Colostathma as a synonym of Amphisa, Crt., which has veins 7 and 8 of the fore wings stalked and 9 separate, whereas Celostathma has 7 and 8 stalked out of 9.

# 198. Cœlostathma parallelana, sp. n.

Antennæ biciliate,  $2\frac{1}{2}$ ; cream-colour. Palpi projecting rather more than the length of the head beyond it; cream-coloured; second joint shaded with fawn-brown externally. Head and thorax cream-colour. Fore wings and cilia cream-coloured, with a dark fawn-brown band from before the middle of the costa to the middle of the dorsum, variable in breadth and distinctness, sometimes diffused or dilated outwards below the middle; this is followed by a second narrower band, commencing on the costa at one-fourth from the apex and reaching to the tornus; a single black dot lies at the end of the cell between veins 5 and 6. Exp. Hind wings pale fawn-grey with a slight reddish al. 12 mm. Abdomen cream-coloured, shaded with grey across the middle. Legs creamy whitish.

Type, ♂ Mus. Hdm.; ♀ Mus. Wlsm. Hab. West Indies—St. Thomas, 4 IV.-14 IV. (Gudmann,

Hedemann). "The larva feeds on Mimosa" (Hedemann).

This species differs from Cælostathma discopunctana, Clem., in the form of the outer band, which is almost parallel with the first instead of being conspicuously curved inward at its upper extremity. Along the costa the intensity of the bands is variable, and in one female they are almost entirely obliterated, the wingcolour becoming pale fawn-ochreons instead of creamy. I cannot, however, doubt that it belongs to the same species.

#### III. PHALONIANÆ.

# 79. Phalonia, Hb.

=†Cochylis, Tr., Stgr. Cat.; ‡Conchylis, Sdf., Fern., &c.

# 199. Phalonia ichthyochroa, sp. 11.

Antennæ whitish cinereous. Palpi projecting nearly the length of the head beyond it; whitish, shaded with brown externally. Head hoary. Thorax shining silvery whitish. Fore wings shining silvery whitish; a rust-brown shade along the base of the costa not extending to the dorsum; a broken fascia commencing on the costa beyond the middle consists of a darkmargined rust-brown spot at its upper extremity and a larger rust-brown shade on its lower half, extending somewhat inwards and containing one or two patches of blackish scales; the apical

portion of the wing is mottled with rust-brown mixed with blackish scales, forming a subapical transverse streak and a spot opposite to the middle of the termen; minute blackish speckling is visible in the whitish cilia and along the dorsum as well as in a series of costal reticulations. Exp. al. 8-10 mm. Hind wings pale brownish grey, with a slight pinkish reflection; cilia paler. Abdomen pale brownish grey. Hind legs pale cinereous.

Type, & Mus. Wlsm.; & Mus. Hedemann. Hab. West Indies—St. Croix, 26 IV. (Gudmann); St. Thomas, 15 III. (Hedemann); GRENADA (Balthazar, 250 ft., windward side, 5-10 IV.—H. H. Smith). Four specimens.

## 200. Phalonia subolivacea, sp. n.

Antennæ whitish. Palpi whitish, shaded with olivaceous on their outer sides. Head whitish. Thorax creamy whitish. Fore wings shining creamy white, shaded with olivaceous along the basal half of the costa; an olivaceous band, descending straight from the middle of the costa, is angulated on the cell, reverting to the dorsum before the middle, at its angle is a small dot of black scales; a small, oblique, olivaceous streak commences on the costa halfway between this and the apex, not quite attaining the middle of the termen, along which is a slight olivaceous shade, with a rounded patch of the same colour lying above the tornus and a small brownish dot below and before it at the commencement of the dorsal cilia; cilia shining creamy whitish. Exp. al. 10 mm. Hind wings pale smoky grey; cilia whitish, shaded along their middle. Abdomen greyish; anal tuft inclining to ochreous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 26 IV.-7 V. (Gudmann); St. Thomas, 7 III.-4 IV. (Gudmann, Hedemann). Nine specimens.

# 201. Phalonia distigmatana, sp. n.

= Conchylis sp. (near angulatana, Rbs.), Wlsm. Pr. Z. Soc. Lond. 1891, 501, 543 (1892) 1.

Antennæ ochreous. Palpi whitish ochreous, slightly shaded Head and thorax whitish ochreous. Fore wings whitish ochreous, with three dark fawn-brown costal spots and the extreme base of the costa also fawn-brown; the first spot occurs at one-fourth from the base and almost meets an oblique streak of a slightly paler shade running outwards from the base of the dorsum; the second is large and triangular, a little beyond the middle, its apex pointing outwards and scarcely separated from the apex of a similar dorsal triangle almost exactly opposite to it, but very slightly nearer to the base; the third costal spot is very minute and less well-defined; from this runs a paler fawn-brown band, outwardly to the termen below the apex and downwards along the terminal margin to the tornus; a small brown spot at the end of the cell, almost between the apices of the costal and dorsal triangles, completes the wing-markings, with the exception

of some scarcely noticeable silvery lines in the apical half of the wing along the edges of the darker markings; cilia pale ochreous. Exp. al. 9 mm. Hind wings and cilia greyish. Abdomen greyish. Legs whitish ochreous.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 25 VI. (Hedemann); St. Vincent (H. H. Smith)<sup>1</sup>; Grenada (Balthazar, 250 ft., windward side, 13 IV.-4 V. (H. H. Smith). Five specimens.

I am unacquainted with the following three species, and therefore am unable to refer them to this genus with certainty.

## 202. PHALONIA? PROLECTANA, Mschl.

Cochylis prolectana, Mschl. Ab. Senck. Nat. Ges. XV. 332, 354 (1890)<sup>1</sup>. Conchylis prolectana, Wlsm. Pr. Z. Soc. Lond. 1891, 500, 543 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1,2.

## 203. PHALONIA? TECTONICA, Mschl.

Cochylis tectonica, Mschl. Ab. Senck. Nat. Ges. XV. 332-3, 354 (1890) <sup>1</sup>. Conchylis tectonica, Wlsm. Pr. Z. Soc. Lond. 1891, 501, 543 (1892) <sup>2</sup>.

Hab. West Indies—Portorico 1, 2.

# 204. Phalonia? vicinitana, Mschl.

Cochylis vicinitana, Mschl. Ab. Senck. Nat. Ges. XV. 333, 354 (1890) <sup>1</sup>. Conchylis vicinitana, Wlsm. Pr. Z. Soc. Lond. 1891, 501, 543 (1892) <sup>2</sup>.

Hab. West Indies—Portorico 1,2.

# 80. Thyraylia, g. n. (θὔραυλία=living out of doors.)

Type, Conchylis bunteana. Rbs.

Antenna & shortly biciliate.

Palpi moderate, porrect; second joint roughly clothed; apical joint short, blunt.

Head roughly clothed.

Thorax smooth.

Fore wings: 3 without a costal fold; costa somewhat straight, rounded to the slightly depressed apex; termen rather oblique, not sinuate beneath apex; tornus rounded. Neuration: 12 veins all separate; 2 from outer fourth of cell, 7 to costa above apex.

Hind wings slightly broader than the fore wings, trapezoidal; apex and tornus rounded; termen and dorsum subsinuate. Neuration: 8 veins; 3 and 4 connate (or stalked), 5 almost straight but inclining to 4 towards base, 6 and 7 stalked.

Hind legs smooth.

Allied to Phtheochroa, Stph. (Commophila, Meyr.), from which it

differs in the much shorter palpi, in vein 7 of the fore wings attaining the costa before the apex, and in the absence of raised scales. It is possible that specimens in better condition might exhibit a slight thoracic tuft.

#### 205. THYRAYLIA BUNTEANA, Rbs.

Conchylis bunteana, Rbs. Tr. Am. Ent. Soc. II. 288, Pl. VIII. 86 (1869)<sup>1</sup>; Z. Verh. z.-b. Ges. Wien, XXV. 245-6 (1875)<sup>2</sup>; Fern. Tr. Am. Ent. Soc. X. 26. No. 144 (1882)<sup>3</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 501, 543 (1892)<sup>4</sup>.

Hab. United States 1-4. West Indies—St. Vincent 4.

## 206. THYRAYLIA LEPIDANA, Clem.

Argyrolepia? lepidana, Clem. Pr. Ac. Nat. Sc. Phil. XII. 355 (1860)<sup>1</sup>. Conchylis lepidana, Rbs. Tr. Am. Ent. Soc. II. 287, Pl. VIII. 84 (1869)<sup>2</sup>; Fern. Tr. Am. Ent. Soc. X. 25. No. 142 (1882)<sup>3</sup>.

Hab. UNITED STATES 1-3. West Indies—JAMAICA (Kingston, 17 VII.—Cockerell); St. Croix, 6-18 V. (Gudmann, Hedemann, Pontoppidan).

## 207. THYRAYLIA LACTEIPALPIS, WISM.

Conchylis lacteipalpis, Wlsm. Pr. Z. Soc. Lond. 1891, 500, 543 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

## IX. TINEIDÆ.

#### I. OPOSTEGINÆ.

### S1. OPOSTEGA, Z.

## 20S. Opostega abrupta, sp. n.

(Head missing.) Thorax shining white. Fore wings shining white, with pale bluish reflections; before the apex a pale fawn-brown costal streaklet, tending obliquely outwards, is dark-margined on both sides, this runs nearly parallel with the upper half of a slender dark line in the apical cilia which is continued around the termen, with a slight inclusion opposite the apex of the wing, below which is a small reduplicated black dot; the cilia beyond the dark line which runs through them are fawn-brown, their basal half white along the termen and gradually shading to fawn-brown on the dorsum. On the underside the brown outer ends of the apical cilia are plainly visible. Exp. al. 5.5 mm. Hind wings and cilia shining pale fawn-brown. Abdomen shining fawn-brown. Hind legs pale fawn-brownish, the bristles strongly developed.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 19 III. (Hedemann). Unique. Although the head is missing, it is easy to decide that this is an undescribed species of the genus to which I refer it.

## 209. Opostega adusta, sp. n.

Antennæ with a broad shining white eyecap on the basal joint; beyond pale fawn-brownish. Palpi pale fawn-brownish. Head and thorax shining white. Fore wings shining white, with blue and lilac reflections: a conspicuous umber-brown dorsal spot at about one-third from the base; a narrow dark umber-brown shade along the costa a little beyond the middle is continued to the commencement of the costal cilia; a slender fuscous line beginning in these runs obliquely outwards through the cilia forming an angle at the apex of the wing, thence deflected along the termen; this is reduplicated by a slight shade in the middle of the fawn-brown cilia beyond it, its upper half preceded by a slight ferruginous tinge running parallel with it from costa to apex; cilia shining pale fawn-brownish along the dorsum and tornus. Underside spotless. Exp. al. 5 mm. Hind wings and cilia pale fawnbrownish. Abdomen (somewhat denuded) shining pale brownish. Hind legs shining pale brownish ochreous, the bristles continued to the tarsal joint.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 20 III. (Hedemann). Unique.

## 210. Opostega venticola, sp. n.

Antennæ golden yellow; eyecaps shining white. Palpi white. Head and thorax shining white. Fore wings shining white, with two minute oblique fuscous costal streaklets followed by a short straight one before the apex, all tending to converge in the direction of a single black point in the apical cilia; the space between the first and second streak is golden yellow, which extends also to the black point but not to the dorsum or tornus; a very narrow faint golden spot rests on the middle of the dorsum; beyond the black point a slight shade is visible in the cilia, which are otherwise white with a golden tinge. Exp. al. 6 mm. Hind wings whitish grey; cilia golden white. Abdomen white with a golden tinge. Legs: hind tibiæ and basal joints of the tarsi with stiff hairs; whitish ochreous.

Type, & Mus. Wlsm.

Hab. West Indies—HAYTI (Port-au-Prince, 23 V., Gudmann); GRENADA (Balthazar, 250-300 ft., windward side, 5 IV.-8 V.—H. H. Smith). Four specimens.

# 211. Opostega saltatrix, sp. n.

Antennæ with a conspicuous shining white eyecap; remaining joints pale straw. Palpi small, slender, dependent; yellowish. Head and thorax shining white. Fore wings shining white, with a dark olive-grey fascia before the middle, diffused outwards at its upper end to the middle of the costa; this is followed by a streak of the same colour, along the apical portion of the costa, reaching to the apex; a slender streak above it running through the cilia and meeting it beyond the apex, this streak is sometimes very inconspicuous; cilia pale olive-grey. Exp. al. 5 mm. Hind wings very

narrow; pale olive-grey; cilia the same. Abdomen greyish. Legs: hind tibiæ with profuse spiny hairs above; pale greyish.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 18 III.-2 IV. (Gudmann,

Hedemann). Three specimens.

"In repose the moth resembles a Cicada and springs forwards" (*Hedemann*).

#### II. DENDRONEURINÆ.

## 82. Dendroneura, Wlsm.

## 212. Dendroneura præstans, Wlsm.

Dendroneura præstans, Wlsm. Pr. Z. Soc. Lond. 1891, 510, 544, Pl. XLI. 6, a-c (1892) 1.

Hab. West Indies—St. VINCENT<sup>1</sup>; GRENADA (windward side, Chantilly Estate, 350 ft., Balthazar, 250 ft., 13-20 IV.—H. H. Smith).

213. Dendroneura simplex, sp. n.

Antennæ rather shorter than the fore wings; pale yellowish fawn. Palpi short, flattened; apical joint subovate, broader than the second; pale yellowish fawn. Head and thorax pale fawn. Fore wings shining, pale yellowish fawn, with a bright yellowish ferruginous spot before the apex, preceded by two oblique fuscous streaks, one from a little beyond the middle of the dorsum, the other commencing a little beyond it on the costa, the two nearly meeting outwardly at their extremities (these appear to be composed of very fugitive scales and are easily obliterated); beyond the ferruginous spot a dark fuscous (almost black) slender curved line passes from the apex through the silvery-yellowish cilia giving a slight uncate appearance, tornal cilia yellowish grey. Exp. al. 8 mm. Hind wings and cilia yellowish grey. Abdomen pale greyish. Legs shining straw-whitish.

Type, of Mus. Wlsm.

Hab. West Indies—San Domingo (Puerto Plata, 16 V., Gud-

mann). Two specimens.

This differs from prestans, Wlsm., the only other known species of the genus, in the apparent absence of the tuft of long hair-scales arising beneath the eyes, which, so far as I am able to determine, does not exist in this species; but such structures are often only displayed in individual specimens, and in others are completely hidden away.

#### III. LYONETIANÆ.

# 83. LEUCOPTERA, Hb.

LEUCOPTERA, Hb. Verz. bek. Schm. 426 (1826). = CEMIOSTOMA, Z. Lin. Ent. III. 272-3 (1848).

214. Leucoptera coffeella, Guér.-Mén. & Prrott.

= NOCTUELLA, Mdnr.8

Elachista coffeella, Guér.-Mén. & Prrott. Mém. Ins. Cafiers Antill. 1–32, Pl. 1.-II. (1842) ; Rev. Zool. 1842, 126-7; Ann.

Soc. Ent. Fr. XI. Bull. ii. (1842)<sup>3</sup>. Bucculatrix sp., Stn. Ent. Wk. Int. IV. 70 (1858)<sup>4</sup>. Cemiostoma coffcella, Stn. Ent. Wk. Int. X. 110-11 (1861)<sup>5</sup>. Elachista coffcella, Nietn. Obs. Enemies Coffee-tree Ceylon, 24 (1861)<sup>6</sup>: (2 edn.) 18 (1872)<sup>6</sup>. . . . . . noctuella, Madinier, Rev. Agr. Imp. Fluminense Agr. No. 3, p. 29 et seq. (18..)<sup>7</sup>. Cemiostoma coffcellum, P. Mann, Am. Nat. VI. 332-41, 596-607, Pl. V. (1872)<sup>5</sup>. Elachista coffcella, Nietn. (Green's edn.) Obs. Enemies Coffee-tree Ceylon, 16 (1880)<sup>6</sup>.

Larva sup. Coffea arabica 1,9. Pupa in hammock (teste fig.) 1.

Hab. West Indies—Guadeloupe, larva and imago, 1.-XII.<sup>1,5,8</sup>; Martinique <sup>7,9</sup>. Brazil.—Vassouras (Prov. Rio Janeiro, intro-

duced from Antilles), larva and imago, III.-V1.9

No. 7 is quoted from Mann (No. 8), as I have not been able to find a copy of the work in London, where indeed the title appears to be unknown, and I should be grateful to anyone who could tell me where it was published. The second edition of Nietner cited above appears to have been overlooked; there is a copy in the British Museum.

# 84. Compsoschema, g. n. (κομψόs=elegant; σχημα=form.)

Type, Compsoschemu bimarginellum, Wlsm.

Antennæ slightly longer than the fore wings, somewhat stout, simple; basal joint with a rather large eyecap. Labial palpi slender, dependent; apical joint as long as second. Maxillary palpi obsolete. Haustellum almost obsolete. Head and face smooth. Thorax smooth. Fore wings somewhat dilated from the base outwards, apex depressed, rounded, termen slightly sinuate beneath the apex. Neuration: 9 veins; 7 and 8 stalked, 7 to costa slightly above apex; 3, 4, and 6 absent. Hind wings  $(\frac{1}{2})$  elongate-acuminate, evenly attenuated from base; cilia 4. Neuration: 5 veins, without a cell (radial and cubital veins coincident); 3 absent, 4 absent, 6 and 7 coincident. Legs: hind tibiæ with somewhat long hairs.

Allied to Lyonetia, Hb.

# 215. Compsoschema bimarginellum, sp. n.

Antennæ yellowish white, eyecaps snow-white. Palpi white. Head and thorax snow-white. Fore wings shining white, a slender outwardly oblique dorsal streaklet from one-half reaches nearly across the wing; this is dark brown, with a golden sheen along its inner margin; some very faint golden-yellow mottling is visible on the apical half of the wing, and there is a minute black spot at the extreme apex; the long whitish cilia, which give the end of the wing a much widened appearance, are marked by two dark brown lines running through them, the first at the base, the other beyond their middle—these both pass around the apex to the costal cilia and reach well through the tornal cilia. Exp. al. 6 mm. Hind wings and cilia pale greyish. Abdomen brownish above.

Legs: hind tibiæ clothed with somewhat long whitish hairs; tarsi white, basal joint distinctly marked with fus cous.

Type, & Mus. Gudmann.

Hab. West Indies—St. Thomas, 12-16 III. (Gudmann, Hedemann). Three specimens.

## 85. COPTODISCA, Wlsm.

§ Aspidisca, Clem. Pr. Ac. Nat. Sc. Phil. XII. 11-12, 209 (1860); Stn. Tin. N. Am. 104-5 (fig.), 143 (1872). Coptodisca, Wlsm. Ent. Mo. Mag. XXXI. 41 (1895).

## 216. Coptodisca rhizophoræ, sp. n.

Antennæ and palpi silvery. Head: face silvery, the head above with a golden sheen. Fore wings golden yellow, with a pair of silvery-whitish costal and dorsal streaks beyond the middle (the dorsal somewhat preceding the costal), both dark-margined before and behind; a very oblique silvery costal streak, also dark-margined, occurs at one-third from the base, and before the apex is a small silvery costal spot, also dark-margined, its outer marginal streak extending downward through the terminal cilia beyond a rounded velvety-black subterminal dot; cilia silvery whitish, with a curved line along their base from the tornus to the subterminal dot; the dorsum slightly silvery. Exp. al. 3·5-4 mm. Hind wings and cilia pale greyish. Abdomen greyish. Legs silvery.

Co-types, (1-2) Mus. Wlsm.

Hab. West Indies - St. Thomas, 15 III.-30 IV. (Gudmann,

Hedemann). Four specimens.

"The young larva mines in leaves of Rhizophora mangle; later on it cuts a case out of the leaves" (Hedemann). Bred by Baron von Hedemann and Mr. Gudmann. Mr. Gudmann found a leaf containing twenty-four mines.

Nearly allied to splendoriferella, Clem.

# 86. Cycloplasis, Clem.

[Clem. Pr. Ent. Soc. Phil. II. 423-4 (1864); Stn. Tin. N. Am. 246-8 (1872).]

# 217. CYCLOPLASIS BASIPLAGATA, sp. n.

Antennæ shining greyish. Palpi and head silvery. Thoraw pale fawn; shining pale creamy-metallic beneath. Fore wings and costal cilia shining pale fawn, a short basal patch darker fawngrey; dorsal cilia greyish. Exp. al. 4 mm. Hind wings and cilia tawny greyish. Abdomen tawny grey: underside shining pale creamy metallic. Legs pale fawn; the spines on the tibiæ and tarsi very distinct.

Type, & Mus. Wlsm.

Hab. West Indies—St. Thomas, 10 III.-10 IV. (Gudmann, Hedemann). Two specimens.

Larva in a case similar to that of a Coleophora (Hedemann); on

Sida sp. (Gudmann). The moth holds the second pair of legs

outstretched as in Stathmopoda (Hedemann).

It is interesting to find a second species of this genus, originally described by Clemens from Pennsylvania. I have not had sufficient material to enable me to critically examine the structure of this genus, which is perhaps allied to *Heliozela*, HS.

#### IV. BEDELLIANÆ,

#### 87. Bucculatrix, Z.

#### 218. Bucculatrix flexuosa, sp. n.

Antennæ with a strong shining white eyecap on the basal joint; pale fawn, with minute darker annulations towards the apex. (Palpi obsolete.) Head whitish, with a line of fawn-coloured hairs down the middle; face shining white. Thorax fawn, the tegulæ with white longitudinal streaks. Fore wings fawn, with white lines-one from the base scarcely below the costa reaches to the end of the cell; another following the extreme costa from the base is deflected to the end of the cell from about the middle of the wing-length, nearly reaching to a short longitudinal black streak beyond the outer end of the cell; another white line from the base of the dorsum reaches along the fold to one-third. nearly joining a sinuous white line which, arising from before the middle of the dorsum, is waved upwards and outwards, reverting to the tornus and thence overspreading the termen and cilia to below the apex; there are two slender fawn-coloured dark lines running through the white cilia at and above the apex. Exp. al. 5 mm. Hind wings pale greyish, cilia brownish grey. Abdomen grevish ochreous, Legs fawn-white, the tarsi minutely speckled with fuscous.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 8 III.-2 IV. (Gudmann, Hede-

mann). Six specimens.

Bred by chance in a glass containing some twigs of Acacia arabica, but the larva was not observed (Gudmann).

# 219. Bucculatrix unipuncta, sp. n.

Antennæ whitish. (Palpi obsolete.) Head and thorax creamy white. Fore wings creamy whitish, suffused and shaded with pale fawn-ochreous, especially along the base of the fold and along the outer two-thirds of the costa; with a single strong black dot before the termination of the fold; a short slender line runs through the apical cilia, and there are a few black scales at the extreme apex and at the base of the whitish cilia. Exp. al. 6 mm. Hind wings and cilia very pale yellowish grey. Abdomen shining, pale whitish ochreous. Legs whitish, tarsal joints minutely spotted with fuscons.

Type, & Mus. Hedemann.

Hab. West Indies-St. Thomas, 12 III.-3 IV. (Hedemann). Two specimens.

### 88. TISCHERIA, Z.

## 220. TISCHERIA HELIOPSIELLA, Chamb.

†HELIOPSISELLA, Chamb. (‡HELIOPSIELLA, Wlsm.<sup>8</sup>) = NOLCKENII, F. & B.<sup>8</sup>

Tischeria heliopsisella, Chamb. Cin. Qr. Jr. Sc. II. 113-4 (1875) <sup>1</sup>. Tischeria nolckenii, F. & B. Stett. Ent. Ztg. XXXVII. 220 (1876) <sup>2</sup>. Tischeria heliopsisella, Chamb. Bull. U.S. G.G. Surv. IV. 115 <sup>3</sup>, 116 <sup>4</sup>, 165 <sup>5</sup> (1878). Tischeria nolckenii, F. & B. Stett. Ent. Ztg. XXXIX. 257 (1878) <sup>6</sup>. Tischeria heliopsisella, Hgn. (& Frey) Pap. IV. 153 (1884) <sup>7</sup>. Tischeria heliopsiella, Wlsm. Ins. Life, II. 325 (1890) <sup>8</sup>: III. 389 (1891) <sup>8</sup>; Riley, Smith's List Lep. Bor. Am. 110. No. 5917 (1891) <sup>10</sup>.

Hab. UNITED STATES 1-10— Kentucky 1, 7, 8; Texas 2, 6, 8; California 8. Larva, Ambrosia trifida and spp. 1-3, 6, 8; Heliopsis laevis and spp. 1, 4, 8, VII. 6, VIII. 6, 8, IX. 6; imago, VIII. 8, summer and fall 1. West Indies—St. Thomas, 2 IV. (Gudmann).

Bred by Mr. Gudmann, but the plant not identified.

## 221. Tischeria unicolor, sp. n.

Antennæ greyish fuscous. Palpi ochreous. Head pale ochreous. Thorax brownish ochreous. Fore wings ochreous, with a very slight darkened shade at the extreme base of the costa and a faint reddish gloss (in some lights) towards the apex; cilia concolorous with the wings. Exp. al. 6 mm. Hind wings pale grey; cilia reddish grey. Abdomen whitish ochreous. Legs whitish ochreous.

Type, 3 Mus. Gudmann.

Hab. West Indies—St. Croix, 5 V. (Gudmann). Unique. Bred by Mr. Gudmann from larvæ mining leaves of a tree which was not identified.

# 222. TISCHERIA PULVEREA, sp. n.

Antennæ, 3 with very long biciliations; pale fuscous. Palpi short, straight, drooping; whitish. Head and thorax fawn-yellowish. Fore wings pale fawn-yellowish, profusely sprinkled around all the margins (but especially along the costa) with smokyfuscous scales; a slight indication of a dark dorsal mark before the tornes; cilia greyish. Exp. al. 5 mm. Hind wings pale grey; cilia yellowish grey. Abdomen greyish. Legs unspotted, yellowish white. Type, 3 Mus. Wlsm.

Hab. West Indies—St. Thomas, 15-30 III. (Gudmann, Hede-

mann). Two specimens.

Bred by Mr. Gudmann, but the plant not identified.

#### V. GRACILARIANÆ.

# 89. LITHOCOLLETIS, Hb.

# 223. LITHOCOLLETIS? ALBIMACULA, sp. n.

Antennæ cinereous, with a broad white band before the apex. (Palpi apparently broken in setting.) Head orange-ochreous, the Proc. Zool. Soc.—1897, No. X.

face silvery. Thorax dark bronzy brown. Fore wings dark bronzy brown, with two narrow transverse fasciæ, the one before, the other scarcely beyond the middle, and a short dorsal streak from the anal angle shining silvery metallic, a strong snow-white spot running through the costal cilia; cilia bronzy brown. Exp. al. 7.5 mm. Hind wings and cilia slightly paler bronzy brown. Abdomen purplish fuscous. Legs brownish: the tarsal joints broadly banded with whitish; two small white spots at the end of the tibiæ.

Type, ♂ Mus. Hedemann.

Hab. West Indies—St. Thomas, 10 IV. (Hedemann). Unique. This species cannot be referred with certainty to Lithocolletis as the underside of the head is injured in pinning.

# 224. LITHOCOLLETIS DESMODIELLA, Clem.

## = GREGARIELLA, Mrt.10

Lithocolletis desmodiella, Clem. Pr. Ac. Nat. Sc, Phil. XI. 318, 319, 320 (1859) <sup>1</sup>; Stn. Tin. N. Am. pp. xiii, 37, 63, 65, 68 (1872) <sup>2</sup>; Chamb. Can. Ent. III. 127, 162 (1871) <sup>3</sup>: V. 47 (1873) <sup>4</sup>; F. & B. Stett. Ent. Ztg. XXXVII. 227 (1876) <sup>5</sup>; Chamb. Bull. U.S. G.G. Surv. IV. 110 <sup>6</sup>, 154 (1878) <sup>7</sup>: Jr. Cin. Soc. N. H. II. 189-90 (1880) <sup>8</sup>. Lithocolletis gregariella, Mrt. Can. Ent. XIII. 245-6 (1881) <sup>9</sup>. Lithocolletis desmodiella, Wlsm. Tr. Am. Ent. Soc. X. 202 (1882) <sup>10</sup>: Ins. Life, II. 119 (1889) <sup>11</sup>: III. 328. No. 52 (1891) <sup>12</sup>; Riley, Smith's List Lep. Bor. Am. 108. No. 5850 (1891) <sup>13</sup>.

Hab. United States <sup>1-13</sup>. Larva, Inf. Desmodium viridiflorum <sup>1,5,11</sup>, spp. <sup>3,6,8</sup>; Phaseolus pauciflorus <sup>9,11</sup>, sp. <sup>8</sup>, VII. – IX. <sup>1-3,5</sup>. Imago, spring <sup>9</sup>; midsummer <sup>9</sup>. West Indies — St. Thomas, 11 III.–10 IV. (Gudmann, Hedemann); Larva, Centrosema virginianum (Gudmann).

Bred by Mr. Gudmann and Baron von Hedemann from larvæ

feeding on Centrosema virginianum.

# 225. LITHOCOLLETIS ARGENTIFRONTELLA, sp. u.

Antennee brownish, faintly annulated. Palpi pale saffron. Head and face shining silvery white, the head with a saffron spot behind the white tuft. Thorax pale saffron. Fore wings pale saffron, with four transverse white fasciæ, slenderly darkmargined internally: the first before the middle, slightly curved outwards, the second at the middle, straight, the third at the commencement of the costal cilia tending inwards to the dorsum, the fourth a little before the apex running through the cilia, which are saffron beyond it at the apex but greyish before it on the dorsum. Exp. al. 5 mm. Hind wings and cilia pale greyish. Abdomen greyish. Legs white, with pale saffron annulations.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 11 III.-2 IV. (Hedemann). Two specimens.

#### 226. LITHOCOLLETIS TENUICAUDELLA, WISM.

Antennæ saffron. Palpi whitish. Head pale saffron; face silvery white. Thorax pale saffron. Fore wings pale saffron, with four costal and dorsal streaks shining white, slightly dark-margined before and behind: the first two costal streaks are conspicuous and oblique (the first a little before the middle, the second a little beyond it), the third and fourth costal are very small immediately before the apex, their points turned slightly inwards; the first dorsal arises on the middle, its apex reaching as far as that of the second costal, but it is much less clearly defined; the second and third dorsal are opposite to the outer costal streaks, but are also indistinct; a round black spot lies at the extreme apex, a slender smoky line running through the cilia in a half circle beyond it, to which is attached a slender smoky line running straight outward to the end of the cilia, which are slightly marked with white above and below it; dorsal cilia greyish. Exp. al. 5 mm. Hind wings and cilia greyish. Abdomen grey. Legs whitish, with faint tarsal spots.

Type, & Mus. Hedemann.

Hab. West Indies-St. Croix, 1 V. (Hedemann). Unique.

## 90. Ornix, Tr.

## 227. Ornix errantella, sp. n.

Antennæ slightly longer than the fore wings; yellowish grey. Palpi drooping, slender; whitish cinereous. Head with projecting scales above; pale cinereous. Thorax pale stone-grey. Fore wings pale stone-grey, with brownish-fuscous longitudinal streaks: the first commencing at the base leaves the costa at one-fourth, extending to the outer end of the cell where it almost joins a sharply-angulated costal streak of the same colour; the second commencing at the base of the dorsum extends to two-thirds the wing-length, its lower edge obtusely biangulated and more sharply defined than its upper edge, which is somewhat diffused; a slender streak from before the tornus points towards the apex, but is terminated by a reduplicated oblique transverse bar extending outward to the termen, above the tornus, from the commencement of the costal cilia; the central space between the dark margins of this band is somewhat silvery, and beyond the band the triangular apical space left by it contains a dark fuscous spot margined before and beneath by silvery scales, with a short streak of the same from the apex; cilia brownish grey, becoming whiter towards the apex. Exp. al. 8.5 mm. Hind wings and cilia brownish grey. Abdomen brownish grey. Legs bone-whitish, with faintly mottled tarsal joints.

Type, & Mus. Gudmann.

Hab. West Indies—St. Thomas, 18 III. (Gudmann). Unique.

## 91. Spanioptila, g. n.

 $(\sigma \pi \dot{\alpha} \nu \iota os = \text{slender}; \pi \tau \dot{\iota} \lambda o \nu = \text{wing.})$ 

Type, Spanioptila spinosum, Wlsm.

Antennæ longer than the fore wings, simple; basal joint with a pecten.

Labial palpi long, slender, drooping, curved, divergent, naked;

terminal joint shorter than second.

Maxillary palpi moderate, filiform, drooping.

Haustellum moderate.

Head and face smooth.

Thorax smooth.

Fore wings narrow, elongate, lanceolate, dorsum ciliate almost to base. Neuration: 8 veins; 11 absent, 10 absent, 7 to apex, 3 absent.

Hind wings linear, acute, cilia 5. Neuration: 6 veins; cell open, 3 and 4 coincident, 5 and 6 coincident.

Abdomen long and slender.

Legs: front tibiæ slightly thickened with scales at their end; middle and hind tibiæ and tarsi clothed with spiny hairs, tending to arrange themselves in tufts.

Allied to *Gracilaria*, but distinguishable by the narrower wings and consequently more degraded neuration, by the pecten on the basal joint of the antennæ, and by the bristly middle and hind legs.

## 228. Spanioptila spinosum, sp. n.

Antennæ white, the basal joint with a pecten beneath. Palpi white. Head snow-white. Thorax white, with a yellowish tinge. Fore wings white, with a yellowish tinge and some dark brownish transverse speckling which becomes agglomerated in two elongate dorsal marks, one before and one beyond the middle, also in a faint costal spot above each of them; a slender ochreous shade runs from the end of the cell to the apex where a smoky line crosses the cilia, giving a falcate appearance not due to the form of the wing which is acute; the cilia, which extend along the dorsum nearly to the base, are tawny greyish. Exp. al. 10 mm. Hind wings pale grey, with tawny-grey cilia. Aldomen shining whitish. Legs white; bristly above on the hind tibiæ and tarsi, the latter flecked with umber-brown at the feet and spurs.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—St. Thomas, 22 III.-12 IV. (Gudmann, Hedemann). Five specimens.

# 92. Еисоѕморнова, д. п.

(εὖ=beautiful; κόσμος= an ornament; φορεῖν=to carry.)

Type, Eucosmophora dives, Wlsm.

Antennæ more than  $1\frac{1}{4}$ , simple; basal joint without a pecten. Labial palpi strongly recurved laterally, smooth; apical joint longer than second.

Maxillary palpi well-developed, not folded, slightly recurved, dependent or porrect, smooth.

Haustellum moderate.

Head and face smooth.

Thorax smooth.

Fore wings narrow, elongate, lanceolate, dorsum ciliate almost to base. Neuration: 8 veins; 7 to costa, 8 absent, 3 and 4 absent, 6 absent.

Hind wings narrow, lanceolate, acute, cilia 4. Neuration: 6 veins, cell open, 5 and 6 coincident, 3 and 4 coincident.

Abdomen long, slender.

Legs: hind tibiæ pectinate above with moderately long stiff bristles, middle tibiæ unclothed.

Allied to Spanioptila, from which it differs essentially in the smooth middle tibiæ, and in the hind tibiæ being merely pectinate.

## 229. Eucosmophora dives, sp. n.

Antennæ pale greyish, with an æneous sheen at the base. Palpi strongly recurved laterally, of even width throughout; whitish. Head and thorax smooth, shining metallic eneous. Fore wings bright metallic æneous, merging into cupreous before the apex; nearly at the base of the costa is an elongate subovate black spot extending to about one-fourth; beyond it an elongate bright orange costal patch, before the middle of which is a shining silvery white oblong costal spot, slenderly black-margined except at its upper edge; the orange patch is also margined beneath by a narrow black shade; a small blackish spot below the costa at the commencement of the costal cilia separates the orange patch from the cupreous apical portion of the wing, but the extreme apex becomes again shining æneous; cilia bronzy grey. Exp. al. 8 mm. Hind wings and cilia grey. Abdomen beneath shining pale æneous, above shaded with grey. Legs: hind tibiæ with a comb of short bristles above throughout their length: pale straw-colour, tarsi unspotted.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., and Chantilly Estate, 350 ft., windward side, 13 IV.-15 V.—H. H. Smith). Six specimens.

# 230. Eucosmophora ornata, sp. n.

Antennæ brownish. Labial and maxillary palpi white. Head and thorax white, both laterally tinged with pale olive-brown. Fore wings pale olive-brown from the base to nearly two-thirds, thence blending to rich reddish orange; a silver-white dorsal streak throughout, interrupted by a small orange spot at two-thirds the wing-length; in the orange portion of the wing is a very oblique silvery metallic streak before the costal cilia, followed by two minute opposite silvery metallic marginal spots beyond which the costa and costal cilia are shining white, a fuscous streaklet running through them at the apex (accompanied by some

orange) in an uncate form; cilia below the apex white, an orange line descending through them near their tips, and a dark fuscous line marking their base along the termen; cilia behind the tornus grey. Exp. al. 8 mm. Hind wings and cilia brownish grey. Abdomen pale brownish ochreous. Legs whitish ochreous, tarsal joints faintly dark-spotted; hind tibiæ distinctly clothed with a stiff pecten of ochreous hairs above.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 300 ft., windward side, S V.—H. H. Smith). Unique.

## 231. EUCOSMOPHORA INSULELLA, WISM.

Zarathra insulella, Wlsm. Pr. Z. Soc. Lond. 1891, 538-9 (1892)<sup>1</sup>. Zarathra insulsella, Wlsm. Pr. Z. Soc. Lond. 1891, 548 (1892)<sup>2</sup>.

Hab. West Indies—San Domingo (Puerto Plata, 16 V.—Gudmann); St. Vincent<sup>1</sup>.

## 232. Eucosmophora cupreella, sp. n.

Antennæ fuscous, longer than the fore wings. Palpi somewhat slender, slightly recurved, the apical joint as long as the second; whitish. Head ochreous. Thorax cupreous. Fore wings coppery brown with a slight gloss; a slender ochreous line along the dorsum from the base; a narrow outwardly oblique costal streak a little beyond the middle, white blending into steel-grey at its lower extremity; a transverse outwardly curved steel-grey band crosses the wing before the apex terminating in an ochreous spot on the costa, the space before it rich chestnut blending into the ground-colour, the space beyond it bright ochreous, separated from the whitish ochreous cilia by a steel-grey line with a small chestnut spot at the apex. Exp. al. 9 mm. Hind wings and cilia brownish grey. Abdomen dark fuscous. Legs brownish grey; hind tibiæ with the apex and spurs white, hind tarsi whitish barred with greyish.

Type, & Mus. Wlsm.

Hab. West Indies—Jamaica (Monteague, 1100 ft., XI.—Rendall). Unique.

# 93. DIALECTICA, g. n.

(διαλεκτικώς=provocative of discussion.)

# Type, Gracilaria scalariella, Z.

Antennæ not exceeding the length of the fore wings, simple.

Labial palpi smooth, drooping; the apical joint as long as the second, slightly recurved.

Maxillary palpi slender, smooth, acute, porrect.

Head and thorax smooth.

Fore wings narrow, elongate, attenuated at the apex, with long cilia, ornamented with recurved lines. Neuration: 11 veins, all separate, 7 to costa.

Hind wings very narrow, elongate, attenuate; cilia 5. Neuration: 7 veins; 3 and 4 coincident, cell open, 5 and 6 stalked.

Legs: hind tibiæ pectinate above throughout, inner spurs much

longer than the outer.

The pectinate hind tibiæ separate this genus from *Gracilaria* and *Ornix*, to which it is allied.

## 233. Dialectica sanctæ-crucis, sp. n.

Antennæ smoky-whitish. Palpi white, unspotted. Head and face white. Thorax white, tegulæ and sides pale copper-brown. Fore wings pale copper-brown, with two large shining white triangular patches on the dorsum, their apices reaching the costa; the first, at the base, covering nearly one-third of the dorsum, the second on the middle, both delicately margined with black scales externally, the second also internally; beyond these at the tornus is an elongate subovate shining silvery-white dorsal patch, above which a short oblique slender white costal streaklet, black-margined on either side, crosses to the termen before the apex; cilia at the apex greyish, with two short dividing streaklets, below the apex coppery brown, at the tornus shining white and behind it greyish. Exp. al. 7 mm. Hind wings and cilia grey. Abdomen shining greyish. Legs: posterior pair white with a black dot between the spurs.

Type, & Mns. Wlsm.

Hab. West Indies—St. Croix, 17 V. (Gudmann); St. Thomas, 2 IV. (Hedemann); St. Jan, 4 IV. (Gudmann). Three specimens. This species belongs to the group of scalariella, Z., and is most nearly allied to nolchenii, Z. Bred by Mr. Gudmann, but the plant not identified.

# 234. Dialectica rendalli, sp. n.

Antennæ brownish. Palpi white. Head and thorax white, the latter shaded across the front with brown. Fore wings brown with two broad snow-white transverse fasciæ followed by a slender oblique costal streak and a semicircular subapical costal spot, with some white scales around the apex and about the tornus; the first fascia is broader on the dorsal than on its costal extremity, the second is slightly oblique, tending outwards from the costa, and is somewhat widened towards the dorsum; cilia brownish grey. Exp. al. 7 mm. Hind wings and cilia dark brownish grey. Abdomen greyish brown. Legs: hind tibiæ with a comb of bristly scales above; white, shaded along the tibiæ and banded on the tarsi with brown.

Type, & Mus. Wlsm.

Hab. West Indies—Jamaica (Monteague, 1100 ft., XI.—Ren-

Nearly affied to fasciella, Chamb., but distinguished by the absence of a third fascia.

## 235. DIALECTICA PERMIXTELLA, sp. n.

Antennæ yellowish. Palpi white, with a grey spot before the apex of the terminal joint, which is especially conspicuous on the underside. Head stramineous. Thorax dirty whitish. wings dirty whitish on the basal half, straw-ochreous beyond, with greyish-fuscous streaks and reticulations, on the basal half these are placed transversely; a reduplicated patch from the base of the costa, not quite reaching the dorsum, is more conspicuous than some more slender similar markings beyond it; beyond the middle of the wing the markings assume a longitudinal direction, but are curved and interlaced so as to form enclosed patches of the ochreous ground-colour, of which the most conspicuous is an obliquely placed patch at three-fourths the wing-length, its lower extremity directed inwards between two greyish fuscous lines, the lower of which is reduplicated, the upper one being preceded by similar curved lines running between ochreous patches; near the apex is a slightly curved narrow shining whitish fascia, dark-margined on each side, and at the extreme apex is a dark spot followed by a curved line around the termen at the base of the whitish cilia, through which runs a dark uncate streaklet. Exp. al. 6-9 mm. Hind wings and cilia brownish fuscous. Abdomen brownish ochreous. Hind legs white, spotted with dark brownish fuscous on the posterior end of the tibiæ and at the commencement and middle of the tarsi, the spurs also are dark brownish fuscous.

Type,  $\bigcirc$  Mus. Wlsm.

Hab. West Indies—S. Domingo (Sanches, 14 V.—Gudmann); Grenada (Balthazar, 250 ft., windward side, 1 IV.-4 V.—H. H. Smith). Three specimens.

# 236. DIALECTICA APICEPUNCTELLA, WISM.

Gracilaria apicepunctella, Wlsm. Pr. Z. Soc. Lond. 1891, 540, 548 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT<sup>1</sup>.

# 94. Gracilaria, Hw.

237. GRACILARIA ÆNEOCAPITELLA, WISM.

Gracilaria aneocapitella, Wlsm. Pr. Z. Soc. Lond. 1891, 539-40, 548 (1892).

Hab. West Indies-St. VINCENT1.

# 238. Gracilaria similatella, Z.

Gracilaria similatella, Z. Hor. Soc. Ent. Ross. XIII. 411-2, Pl. VI. 144 (1877)<sup>1</sup>.

Hab. West Indies—St. Croix, 30 IV. (Gudmann); St. Thomas, 14 IV. (Hedemann). Colombia—Chipo, 8 VI. 1

Bred by Mr. Gudmann, but the plant not identified.

## 239. Gracilaria pulverella, sp. n.

Antennæ cinereous, faintly annulated. Palpi cinereous. Head pale cinereous. Thorax dull pale greyish fuscous. Fore wings dull pale greyish fuscous, somewhat mottled on their outer half with shining steel-grey (visible only in a strong light); a pale line along the base of the costal cilia continuing round the apex is dilated to the tornus, covering one half the cilia on the terminal margin, thus leaving a small dark hook beyond it at the apex, two slender dark fuscous lines run along the base and along the middle of the cilia respectively. Exp. al. 6.5 mm. Hind wings and cilia pale brownish grey. Abdomen with a slight reddish tinge. Legs cinereous.

Type, Q Mus. Hedemann.

Hab. West Indies—San Domingo (Puerto Plata, 16 V.—Gudmann); St. Thomas, 2 IV. (Hedemann). Two specimens.

## 240. Gracilaria undosa, sp. n.

Antennæ very pale fawn, faintly annulated. Palpi white. Head very pale fawn. Thorax white. Fore wings very pale fawn, with a slender sinuate white line from the base of the dorsum to the termen below the apex, touching the dorsum at its two downward bends; three oblique white costal streaks, the first scarcely before the middle, the third coalescing with an inverted white spot before the apex, a few dark brown scales around the margins of the streaks; cilia pale fawn with a white streak through them below the apex. Exp. al. 5.5 mm. Hind wings very pale greyish; cilia pale fawn. Abdomen pale fawn-ochreous. Legs white, spotted with pale fawn.

Type, 3 Mus. Wlsm.

Hab. West Indies—Hayri (Port-au-Prince, 23 V.—Gudmann);

St. Thomas, 20 III. (Hedemann). Two specimens.

The smooth crown separates this species from Lithocolletis, to which genus it might be referred at first sight.

# 241. Gracilaria nesitis, sp. n.

Antennæ as long as the fore wings; yellowish white, faintly barred above with brown. Palpi slightly recurved; white, the end of the second joint and a band above the middle of the third joint brown. Head yellowish white. Thorax white, mixed with brown. Fore wings umber-brown, with a nearly straight yellowishwhite central fascia, before which are two slightly oblique illdefined transverse streaks, and beyond it a well-defined costal spot and a few scales of the same colour along the dorsum; cilia pale brownish, at the apex white. Exp. al. 6 mm. Hind wings brownish grey, with tawny-grey cilia. Abdomen pale cinereous. Legs white, with brown tarsal annulations.

Type, ♀ Mus. Gudmann.

Hab. West Indies-St. Thomas, 18-21 III. (Gudmann, Hedemann). Two specimens.

## 95. Coriscium, Z.

#### 242. Coriscium albomarginatum, sp. n.

Antennæ mouse-grey. Palpi white, with a smoky-white brush beneath the second joint and two minute black annulations on Head and thorax smoky-white, the latter the apical joint. margined with mouse-grey. Fore wings dark mouse-grey, with a series of oblique white costal streaklets beginning at one-third from the base, the fifth continued across the wing and meeting a white inverted tornal streaklet, beyond it a sixth costal is inverted before the apex; the dorsum is white throughout; with two dark spots connected with the dark ground-colour in the fold, one before the other behind the middle; a short elongate very oblique white dorsal streaklet ascends before the tornus pointing in the direction of the apex; cilia white, tipped with mouse-grey, with a line of blackish scales along their base sending a short black point through them at the apex; tornal cilia greyish. Exp. al. 6 mm. Hind wings and cilia grey. Abdomen greyish. white, speckled with mouse-grey on the hind tibiæ and tarsi.

Type, & Mus. Wlsm.

Hab. West Indies—St. Thomas, 12 III.-14 V. (Gudmann,

Hedemann). Five specimens.

Bred by Mr. Gudmann and Baron von Hedemann, but the plant not identified.

## 243. Coriscium attenuatum, sp. n.

Antennæ yellowish white, delicately annulated. Palpi recurved, the second joint slightly tufted beneath; white, tinged externally with pale fawn. Head white. Thorax whitish. Fore wings delicate pale fawn-ochreous, with some whitish mottling on the basal half; a slender whitish line along the dorsal margin bending upwards and meeting at a right angle the second of three white costal streaks (which is somewhat more oblique than the other two), the margins of these streaks are peppered with minute black scales; a white dorsal spot lies before the apex of the outer costal streak, and a white apical spot contains a rounded black dot; a slender fawn line running around the apex at the base of the paler cilia, which are also tipped with fawn at the extreme apex. Exp. al. 7 mm. Hind wings pale greyish, with pale fawn-grey cilia. Abdomen fawn-grey. Legs whitish.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 7-28 III. (Gudmann, Hedemann). Three specimens.

Bred by Mr. Gudmann from larvæ feeding on Croton flavens.

#### VI. ARGYRESTHIANÆ.

96. Leucophasma, g. n.

 $(\lambda \epsilon \nu \kappa \acute{o}s = bright ; \phi \acute{a} \sigma \mu \alpha = phantom.)$ 

Type, of Leucophasma phantasmella, Wlsm.

Antenne nearly as long as the forc wings, somewhat flattened towards the base, simple.

Labial palpi slender, short, projecting; second joint sparsely hairy beneath, apical joint as long as the second.

Maxillary palpi and haustellum obsolete.

Head rough above, face smooth.

Thorax smooth.

Fore wings lanceolate, somewhat widened in the middle, apex depressed, slightly uncate, subacute. Neuration: 9 veins; 7 and 8 stalked, enclosing the apex, 3, 5, and 10 absent.

Hind wings (under 1) lanceolate, acute, costal margin suddenly depressed from the middle, cilia  $1\frac{1}{2}$ . Neuration: 7 veins; 4 absent

(coincident with 5); 6 and 7 parallel.

Legs: posterior tibiæ clothed with long fine hairs.

Allied to Cedestis, Z., but differing in the absence of the haustellum.

## 244. Leucophasma Phantasmella, sp. n.

Antennæ shining white. Palpi, head, and face white. Thorax white with a golden-yellow tinge. Fore wings white with a golden-yellow suffusion, more apparent on the middle and towards the apical portion of the wing; a small fuscous dot lies at the extreme apex surrounded by golden yellow; cilia white with a golden-yellow sheen. Exp. al. 11 mm. Hind wings greyish white, cilia with a yellowish tinge. Abdomen shining whitish ochreous. Legs white; hind tibiæ clothed with long white hairs above.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Chantilly Estate, 350 ft., windward side, 13 IV.—H. H. Smith). Unique.

# 97. Argyresthia, Hb.

# 245. Argyresthia percussella, Z. (?).

Argyresthia percussella, Z. Hor. Soc. Ent. Ross. XIII. 246-7 (1877)<sup>1</sup>.

Hab. Colombia—Bogota, m. III. 1 [? West Indies—St. Thomas,

6-10 III. (Gudmann, Hedemann).]

Two specimens from St. Thomas are probably small varieties of this species, but they are not in sufficiently good condition to determine with certainty.

#### VII. ERECHTHIANÆ.

# 98. EREUNETIS, Meyr.

# 246. EREUNETIS MINUSCULA, sp. n.

# (=Nolckenia minuscula, Z. MS.)

Antennæ rather stout, enlarged at the base, simple in the 3; creamy-white. Palpi projecting more than the length of the head beyond it, brush-like beneath; creamy-white. Head rough; cream-coloured. Thorax cream-coloured. Fore wings cream-coloured, more or less shaded and speckled with umber-brown, this shading being concentrated (and therefore more conspicuous) from the

base along the first half of the fold, from beyond the middle of the costa to the lower angle of the cell, and in a subapical oblique costal streak; a dark fuscous streaklet immediately before the extreme apex is preceded by a narrow whitish costal patch; the termen deeply incised below and opposite to it, causing the apex of the wing to turn up sometimes almost at right angles to its surface; cilia creamy whitish, with a slender reduplicated umberbrown line close to their tips. Exp. al. 9 mm. Hind wings, 3 with a hyaline patch at the base; pale golden yellowish, sometimes with a cupreous tinge; cilia whitish with a slight golden or cupreous tinge, a slender reduplicated curved line of umber-brown running through them around the extreme apex. Abdomen whitish ochreous. Legs creamy-white.

Type,  $\mathcal{S} \supseteq \text{Mus. Wlsm.}$ 

Hab. West Indies—Jamaica (Kingston, 26 VII.—Cockerell); St. Croix, 22–28 IV. (Gudmann, Hedemann); St. Thomas, 7 III. –22 IV. (Gudmann, Hedemann); Grenada (Balthazar, 250 ft., windward side, 30 IV.—H. H. Smith). Nine specimens.

[Colombia? (Nolcken). Twelve specimens.]

"In repose the moth holds the end of the fore wings curved

upwards" (Hedemann).

This species varies in the intensity of its colouring, the post-median oblique streak or shade being sometimes continued backward at a right angle to the dorsum, while in other specimens the markings are almost obliterated. I have a series in the Zeller Collection named "Nolckenia minuscula, Mus. Z.," received from Baron von Nolcken, but unfortunately they are only labelled "N." It is possible they may have been taken in St. Thomas or Jamaica, as the Baron visited these islands in December 1870; but he appears to have found Micros scarce in the West Indies, and the specimens were more probably captured in Colombia.

Very closely allied to *Ereunetis iuloptera*, Meyr., an Australian species which also possesses the hyaline patch in the hind wings—it appears to be distinct, but my specimens of *iuloptera* are in poor

condition.

# 247. Ereunetis maculicornis, sp. n.

Antennæ: basal joint with a brush of hair-like scales above and beneath, somewhat serrate on the outer half in the 3; white with three brownish spots, the first at one-third, the second at two-thirds, the third at the apex. Palpi slender, second joint scarcely clothed beneath; white. Head and thorax white. Fore wings shining white, with a pale fawn-ochreous shade from the base along the fold, some similar shading on the outer half of the wing tending to fawn, and two slightly oblique fasciæ; cilia pale fawn-ochreous. Exp. al. 6 mm. Hind wings shining yellowish grey; cilia pale grey. Abdomen and legs very pale ochreous.

Type, & Mus. Hedemann.

Hab. West Indies—St. Thomas, 7 III.-12 IV. (Hedemann). Three specimens.

"In repose the moth holds the end of the fore wings curved

upwards " (Hedemann).

This obscure species, which is allied to minuscula, can be at once separated by the brownish blotches on the antennæ.

## 248. EREUNETIS AEOLELLA, sp. n.

Antennæ longer than the fore wings, slender; pale cinereous. Palpi slender, somewhat dependent; second joint longer than the apical, slightly clothed beneath; dirty whitish. Head rough-haired; whitish cinereous. Thorax whitish cinereous. Fore wings with the costa slightly arched, apex moderately acute; pale brownish fawn-colour, longitudinally streaked throughout with whitish-cinereous lines running from the base to the termen—one above the cell, two along it, and one along the fold; the costa also whitish cinereous; a few black scale-points around the termen at the base of the cilia and one a little beyond the middle of the fold; cilia brownish cinereous. Exp. al. 8 mm. Hind wings and cilia dull greyish. Abdomen brownish grey. Legs whitish cinereous; hind tibiæ with slender greyish hairs above.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—St. Thomas, 7 III.-12 IV. (Hedemann). Three specimens.

## 249. Ereunetis frontella, sp. n.

Antennæ white, faintly annulated with fawn-brown. Head with a long pointed frontal tuft reaching more than the length of the head beyond it; white. Labial palpi slender, the second joint sparsely clothed at its apex; white. Thorax whitish, shaded with fawn-brown. Fore wings whitish, with a broad longitudinal streak of fawn-brown, sprinkled with black scales, extending from the base to the apex, its width encroaching on the dorsal, but not on the costal, half of the wing; a narrower and slightly paler line follows the dorsum throughout; a slender black streak or spot on the pale interspace at one-third from the base; the costal half of the wing is very obliquely striated with pale fawn-brown—the first streak arising at the base, the second before the middle, a third somewhat darker beyond the middle, and a fourth following the margin to the apex, where there is an elongate black spot; cilia whitish, with a slender fawn-brown line running through their base, defining very clearly the acuminate apex, a rather broader shade of the same colour around their outer extremities (the longer cilia on the dorsal margin are not thus marked). Exp. al. 9-10 mm. Hind wings very pale greyish, with pale brownish-ochreous cilia. Abdomen shining brownish ochreous. Legs with long slender hairs above and beneath the tibiæ; yellowish white, the tarsi faintly annulated.

Type, ♂ ♀ Mus. Wlsm.

Hab. West Indies—St. Thomas, 13 III.-7 IV. (Gudmann, Hedemann). Eight specimens.

"In repose the moth holds the end of the wings curved upwards" (Hedemann).

This species, which belongs to the group of *symmacha*, Meyr., most resembles *Comodica acontistes*, Meyr., but is not so strongly marked, and does not possess the notch in the antennæ.

## 250. EREUNETIS LANCEOLATA, sp. n.

Antennæ cinereous. Palpi moderately long, drooping; greyish fuscous. Head above whitish cinereous, face greyish fuscous. Thorax pale cinereous. Fore wings dirty whitish, with a slight yellowish tinge, strongly marked with brownish cupreous in three costal blotches—the first at the base extending to about one-fourth, the second about the middle diffused obliquely outwards to the end of the cell, the third beyond the middle, containing an oblique line and an anteapical triangle of the pale ground-colour, extends very obliquely to a cupreous spot in the apical cilia; the acuminate apex of the wing is defined by a cupreous line along the base of the costal and dorsal cilia, which are of the pale ground-colour. Exp. al. 8–10 mm. Hind wings as broad as the fore wings, lanceolate acuminate; shining pale grey; cilia the same. Abdomen greyish. Legs: hind tibiæ hairy; yellowish white, tibiæ banded with fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—Jamaica (Mandeville, 1950 ft., X.—Cockerell); St. Thomas, 7-30 IV. (Gudmann, Hedemann): four specimens. Brazil—Pará (Amazons), IV., 20 VII., 1 IX.-15 XII. (Schulz): several specimens.

This species belongs to the group of symmacha, Meyr.

# 251. EREUNETIS ÆNEOALBIDA, sp. n.

Antennæ pale yellowish. Palpi dependent; white. Head and face rough; white, the crest brassy-yellow. Thorax shining white, touched with brassy-yellow behind. Fore wings shining, snowwhite, with two transverse fasciæ, three costal streaks, and one dorsal streak, all brassy-yellow—the first fascia close to the base, the second at 1/4, the three costal streaks all very oblique from the middle to the apex, divided from an oblique medio-dorsal streak by a slender black longitudinal line; the second costal streak, which is more slender than the other two, has a fine black line along its inner edge; the dorsal streak is also dark-margined internally; cilia snow-white, with a cuneiform brassy dash along their base from the anal angle, the outer costal streak also running through them at the apex. Exp. al. 7-9 mm. Hind wings pale greyish, with a slight brassy sheen; cilia very pale grey. Abdomen shining pale brownish ochreous. Legs: hind tibiæ hairy above; whitish.

Type, ♂ ♀ Mus. Wlsm.

Hab. West Indies—St. Thomas, 6 III.-12 IV. (Gudmann, Hedemann). Four specimens.

#### VIII. TINEINÆ.

#### 99. TINEA, L.

#### 252. TINEA BREVISTRIGATA.

Antennæ dirty whitish. Palpi whitish, with a fuscous band around the base of the apical joint; second joint with some long separate whitish hairs beneath. Head and thorax hoary greyish. Fore wings hoary whitish, the costa faintly mottled with greyish ochreous, the dorsal half of the wing shaded and speckled with grey; four short dark brownish-fuscous streaks accompanied by a few pale ochreous scales—the first very short, lying on the fold at one-fourth from the base; the second also short, on the cell a little before the middle of the wing; the third larger and more conspicuous, at the end of the fold, reaching the base of the dorsal cilia; the fourth more diffused, running from the end of the cell to the middle of the termen; a slight fuscous shade runs along the base of the hoary-grey cilia. Exp. al. 9-12 mm. Hind wings shining pale greyish; cilia the same. Abdomen cinereous. Legs hoary whitish.

Type, of Mus. Wlsm.

Hab. West Indies—St. Croix, 5-6 V. (Gudmann, Hedemann); St. Thomas, 2 III.-15 IV. (Gudmann, Hedemann). Six specimens.

## 253. TINEA REDUPLICATA, sp. n.

Antennæ bone-white. Palpi externally black nearly to the end of the second joint; apical joint short, also banded with black externally. Head hoary. Thorax bone-white. Fore wings slightly shining, bone-white, speckled with small groups of black and purplish-fuscous scales; a short greyish-fuscous streak along the base of the costa is followed by an irregular series of marginal spots of different sizes to the commencement of the costal cilia; along the fold, before and beyond its middle, are three minute spots of black scales, similar spots extending in a series of three or four along the outer half of the cell, the outer one being opposite to the termen of the cell, others lying on the extreme margins below and above, but a little beyond it; a line of greyish-fuscous scales along the base of the bone-white cilia. Exp. al. 12-14 mm. Hind wings shining greyish, with a slight æneous tinge; cilia corresponding to this colour along their base, but shining whitish on their outer half. Abdomen pale brassy-brown, with silvery transverse lines. Legs bone-white, shaded with brownish grey.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 17-31 III. (Gudmann). Two specimens.

254. Tinea diluticornis, sp. n.

Antennæ yellowish white. Palpi porrect, second joint slightly hairy beneath, apical joint somewhat obtuse, not reaching beyond the head; white, with a fuscous streak on the outer side of the second joint. Head hoary whitish. Thorax whitish, shaded with

brownish grey. Fore wings hoary whitish, suffused and speckled with brownish grey, some dots of the same around the base of the long whitish cilia. Exp. al. 12 mm. Hind wings pale brassyyellow; cilia whitish, with an æneous tinge along their base. Abdomen yellowish grey. Legs whitish.

Type, Q Mus. Wlsm. Hab. West Indies—St. Тномах, 16 IV. (Hedemann). Unique.

## 255. TINEA SCYTHROPIELLA, sp. n.

Antennæ bone-white. Palpi, second joint recurved, somewhat roughened beneath, apical joint short, projected; white. Head and thorax white. Fore wings rather shining, white, sparsely sprinkled with greyish brown; a slender curved greyish-brown line, leaving the costa near the base, reaches obliquely outwards to the fold; a second, from before the middle of the costa, angulated outwards on the cell, descends obliquely to the middle of the dorsum; a small ill-defined blotch of the same colour rests at the end of the cell, with a spot below it about the tornus, followed by others less conspicuous towards the apex; cilia whitish. Exp. al. 14 mm. Hind wings yellowish grey; cilia becoming whitish on their outer half. Abdomen greyish. Legs whitish.

Type, of Mus. Wlsm.

Hab. West Indies—St. Thomas, 8-11 III. (Gudmann). Two specimens.

## 256. TINEA CRETELLA, sp. n.

Antennæ slender, simple  $(\frac{2}{3})$ ; greyish ochreous. Palpi small, slender, drooping, slightly recurved, obtuse, naked; dark fuscous. Head rough; white, face fuscous. Thorax smooth, white; tegulæ white.  $Fore\ wings$  chalky white, with a series of chestnut-brown costal spots and streaks; the first commencing at the base and extending to one-third the length of the wing; after this two smaller length-spots lie on each side of the middle and are followed by a larger, rather triangular, spot of the same colour at the commencement of the costal cilia, beneath this is a minute black dot at the end of the cell; cilia white, with a series of black specks near the base following the termen; tornal cilia greyish.  $Exp.\ al.$  11 mm.  $Hind\ wings$  grey, with a lustrous brassy tinge; cilia grey, with a slight rosy tinge. Abdomen greyish. Legs pale cinereous; hind tibiæ loosely clothed above.

Type, & Mus. Wlsm.

Hab. West Indies—Hayri (Port-au-Prince, 24 V.—Gudmann). Two specimens.

# 257. TINEA UMBRATICOSTELLA, sp. n.

Antennæ smoky brownish, the basal joint fringed with white beneath. Palpi short, drooping; white. Head very rough; white. Thorax white, with a median brown streak. Fore wings lanceolate; white, the costa smoky-brown throughout, broader beyond than before the middle; a pale chestnut-brown shade along the fold and

at the end of the cell, with three or four minute black dots along the outer half of the dorsum, and one near the upper angle of the cell; cilia pale brownish grey, with a smoky-brown line running through them and continued around the apex. Exp. al. 8-10 mm. Hind wings pale grey; cilia with a slight brownish tinge. Abdomen pale yellowish brown. Legs hairy; yellowish white, the tarsi faintly annulated.

Type,  $\mathcal{J} \subseteq Mus. Wlsm.$ 

Hab. West Indies—St. Croix, 5 V. (Hedemann); St. Thomas, 8 III,-13 IV. (Gudmann, Hedemann); St. Vincent (windward side, H. H. Smith). Nine specimens.

## 258. TINEA TISCHERIELLA, sp. n.

Antennæ yellowish, annulated with olive-brown. Palpi drooping; yellowish. Head and thorax pale yellow. Fore wings and cilia shining pale yellow, with a broad olive-brown band (occupying more than the costal half of the wing) extending from the base nearly to the apex, with two very slight projections, one before and one beyond the middle, encroaching upon the pale dorsal space. Exp. al. 6 mm. Hind wings very pale grey; cilia with a faint æneous gloss. Abdomen pale shining ochreous. Legs hairy above; whitish. Exp. al. 6 mm.

Type, ♂ Mus. Hedemann.

Hab. West Indies—Hayti (Port-au-Prince, 22 V.—Gudmann); St. Thomas, 11 IV. (Hedemann). Two specimens.

# 259. Tinea solenobiella, sp. n.

Antennæ bone-whitish. Palpi very short, slender, drooping; bone-white. Head and face rough; bone-whitish. Thorax bone-whitish, with a slight brownish tinge. Fore wings whitish, sparsely suffused with pale greyish brown, which colour also forms some costal speckling as far as the middle and some ill-defined small costal spots beyond the middle; a spot lies on the disc a little before the middle and there is more speckling of the same colour towards the apex and on the outer half of the dorsum; a waved line of brownish-fuscous atoms runs through the bone-white cilia. Exp. al. 9 mm. Hind wings shining whitish grey; cilia bone-grey. Abdomen greyish. Legs whitish; hind tibiæ with long slender hairs above.

Type, Q Mus. Wlsm.

Hab. West Indies—St. Croix, 21 IV. (Gudmann); St. Thomas, 7-17 III. (Gudmann). Four specimens.

A very inconspicuous and faintly-marked species of the group allied to cloacella, Hw.

# 260. Tinea fragilella, sp. n.

Antennæ yellowish white. Palpi very slender, drooping, naked; white. Head and thorax white. Fore wings white, neatly speckled throughout with fuscous, tending to black around the extreme

apex, where it forms a semicircular shade, and on a spot before the margin, preceding the semicircle; a pair of costal spots lie before and beyond the middle, the second equidistant between the first and the apex; cilia above the apex white, at the apex shaded with greyish ochreous, a slender shade-line running through them towards the tornus, where also they become whitish. Exp. al. 8 mm. Hind wings very pale grey; cilia whitish grey. Abdomen white. Legs white, hind tarsal joints delicately spotted with fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—Hayti (Port-au-Prince, 24 V.—Gudmann).

Three specimens.

### 261. TINEA MINUTELLA, F.

Alucita minutella, F. Ent. Syst. III. (2) 344, No. 51 (1794)<sup>1</sup>. Tinea minutella, F. Sppl. Ent. Syst. 500. No. 110 (1798)<sup>2</sup>. Phalana (Alucita) minutella, Turton, Syst. Nat. III. 383 (1806)<sup>3</sup>.

"minutella, 51. A. alis albidis: fasciis tribus fuscis. Statura parva præcedentium. Alæ albidæ, fasciis tribus fuscis, prima baseos, tertia apicis.

"Habitat in America Insulis, Dom. v. Rohr." = West Indies 1-3.

#### 262. TINEA PLUMELLA, WISIN.

Tinea plumella, Wlsm. Pr. Z. Soc. Lond. 1891, 508-9, 544 (1892) 1.

Hab. West Indies—St. Croix, 21 IV.-7 V. (Hedemann); St. Thomas, 10-26 IV. (Gudmann); St. Vincent<sup>1</sup>.

Bred by Mr. Gudmann, who found the larvæ very common on walls and stone fences.

## 263. Tinea tetraonella, sp. n.

Antennæ minutely annulated with brownish fuscous and whitish ochreous; basal joint whitish ochreous. Palpi very short, drooping; whitish, a minute fuscous ring round the apical joint. Head brownish fuscous, mixed with whitish ochreous; face whitish ochreous. Thorax brownish fuscous, sprinkled and slightly mottled with whitish ochreous. Fore wings brownish fuscous, sprinkled and slightly mottled with whitish ochreous; the only noticeable spot of this colour being before the middle of the dorsum, this and other smaller ones beyond it are minutely speckled with fuscous scales; cilia pale whitish ochreous with a dark parting line running through them. Exp. al. 6 mm. Hind wings blue-grey; cilia tawny fuscous. Abdomen brownish fuscous. Legs brownish fuscous, hind tarsal joints banded with white.

Type, & Mus. Hedemann.

Hab. West Indies—St. Croix, 28 IV. (Hedemann); St. Thomas, 12-28 IV. (Gudmann, Hedemann). Four specimens.

"Larvæ on walls and stone fences, not so common as plumella, Wlsm., and very difficult to breed" (Gudmann).

In paler specimens the whitish-ochreous mottling is increased, forming a series of spots along the costa and dorsum. Very near *Tinea phimella*, Wlsm., but apparently distinct; the colour of the fore wings is more suffused.

### 264. Tinea pumiliella, sp. n.

Antennæ cinereous. Palpi very small, drooping, cylindrical; dirty whitish. Head and face rough; whitish cinereous above, face inclining to ochreous. Thorax whitish cinereous. Fore wings whitish cinereous, blotched with ferruginous, especially on the outer portion and on the inner margin of a slender, almost straight, transverse black fascia slightly before the middle; a blackish streak along the base of the costa and a blackish costal spot at two-thirds from the base; on the outer edge of the central fascia is a pale band, almost white, but ill-defined externally; the pale cilia are minutely speckled with black scales. Exp. al. 6 mm. Hind wings yellowish grey; cilia pale grey. Abdomen bronzy grey. Legs whitish.

Type, & Mus. Wlsm.

Hab. West Indies—St. Croix, 8 V. (Hedemann); St. Thomas, 12–30 III. (Gudmann, Hedemann). Three specimens.

### 265. Tinea cumulatella, Z.

Tinea cumulatella, Z. Hor. Soc. Ent. Ross. XIII. 211-2 (1877)<sup>1</sup>. Hab. West Indies—St. Thomas, 11 III.-14 IV. (Gudmann,

Hedemann). Colombia, Fusagasuga, 16 IV.

There is one male and three females in the collection, which can be distinguished from *cumulatella*, Z., only by their paler hind wings. The type is unique, and I should not venture to separate them specifically on this ground alone, as I find in the present series some variation in this respect.

## 266. TINEA NIGROVITTA, sp. n.

Antennæ pale brownish. Palpi drooping, slender, second joint sparsely clothed; whitish cinereous. Head pale brownish. Thorax greyish brown. Fore wings greyish brown, indistinctly speckled and smudged with a darker shade of the same colour; cilia slightly paler, with a dark shade running through them near the base. Exp. al. 10 mm. Hind wings brownish grey, with a conspicuous patch of deep black scales below the costa near the base on the upper side; some short erect bristling hairs ou the costal margin; cilia slightly paler than the wings. Abdomen pale brownish. Legs pale cinereous.

Type,  $\mathcal{J}$  Mus. Gudmann.

Hab. West Indies—St. Thomas, 8 IV. (Gudmann). Unique. This species is separable from Tinea cumulatella, Z., only by the distinct black patch on the upper surface near the base of the hind wings in the male and in its yellower and paler hind wings; in all other respects it almost absolutely resembles it.

### 267. TINEA FAMILIARIS, Z.

Tinea familiaris, Z. Hor. Soc. Ent. Ross. XIII. 214-6 (1877). Hab. West Indies—Hayti (Port-au-Prince, 23 V., Gudmann); St. Thomas, 13 III. ("in the house"—Gudmann). Colombia—Fusagasuga".

Mr. Gudmann bred this species at St. Thomas.

### 268. Tinea pallidorsella, Z.

Tinea pallidorsella, Z. Hor. Soc. Ent. Ross. XIII. 212-4 (1877)<sup>1</sup>. Hab. West Indies—St. Thomas, 15 III. (Gudmann). Colombia—Ubaque, 23 III.<sup>1</sup>

### 269. Tinea frontestrigata, sp. n.

Antennæ  $(\frac{2}{3})$ ; pale ochreous, distinctly annulate with dark fuscous. Palpi short, drooping, second joint with a rough brush beneath, apical joint as long as the second; pale ochreous, externally blotched with fuscous on each joint. Head whitish ochreous at the sides, banded and shaded above with fuscous; face ochreous. Thorax dark fuscous, obscurely speckled with ochreous. Fore wings bright ochreous, thickly sprinkled with dark purplish fuscous, which has a tendency to coalesce in a small transverse subcostal patch near the base, in a dorsal patch a little beyond the base, in a strong shade occupying the outer half of the cell and reaching to the costa, and on the apical portion of the wing, where it also sprinkles the pale ochreous cilia over two-thirds their length. Exp. al. 7 mm. Hind wings narrower than the fore wings; purplish grey, cilia the same. Abdomen purplish grey, anal tuft ochreous. Legs dark greyish, with pale ochreous tarsal spots and spurs.

Type, & Mus. Gudmann.

Hab. West Indies -- St. Croix, 2 V. (Gudmann). Unique.

# 270. TINEA AUROMACULATA, sp. n.

Antennæ yellow, faintly annulated with tawny brown. Palpi slender, drooping; yellowish, externally tawny. Head and thorax golden yellow. Fore wings tawny brown with a purplish gloss, marbled with golden yellow, of which there is a spot at the extreme base, a larger spot at the middle of the fold reaching to the dorsum, another spot at the outer end of the fold, a fourth on the disc above and between the last two, and one at the end of the cell reaching to the costa; apex and apical cilia golden yellow, dorsal cilia tawny grey. Exp. al. 6.5 mm. Hind wings and cilia bronzy grey. Abdomen bronzy greyish. Legs slightly paler.

Type, & Mus. Hedemann.

Hab. West Indies-St. Thomas, 20 III. (Hedemann). Unique.

## 271. TINEA DIVISA, sp. n.

Antennee of the male pubescent; creamy-white, delicately annu-

lated with brownish fuscous. Palpi slender, depressed, whitish; the second joint with some brownish hairs beneath its apex. Head rough; white. Thorax bronzy fuscous. Fore wings and cilia bronzy fuscous; a rather broad cream-white central fascia tinged with brownish ochreous is slightly attenuated toward the costa, from which it is separated by a narrow line of the dark ground-colour; beyond the fascia is a small patch of brownish-ochreous scales at the end of the cell, with a few others at the extreme apex. Exp. al. 6.5 mm. Hind wings and cilia brownish. Abdomen brownish. Legs whitish ochreous, with some brownish hairs on the tibiæ.

Type, & Mus. Hedemann. Hab. West Indies—St. Thomas, 12 IV. (Hedemann). Unique.

### 100. TINEOLA, HS.

### 272. TINEOLA UTERELLA, sp. 11.

Antenne smoky fawn-colour. Palpi: maxillaries not folded: labials short, porrect; smoky fawn. Head smoky fawn-colour, face brownish ochreous. Thorax smoky fawn. Fore wings yellowish fawn, with minute fuscous speckling: a purplish fuscous blotch on the costa near the base is partly connected with a spot of the same colour lying obliquely beneath it on the fold; beyond this are two spots before the middle of the wing, the smaller on the fold, the larger on the disc slightly beyond and above the lower one; a larger spot of the same colour lies at the end of the cell, and there are a few dark scales at the base of the dorsum; (these markings although showing a purplish gloss in a strong light appear blackish under the lens); cilia fawn-grey. Exp. al. 3 10-\$\time\$ 15 mm. Hind wings pale grey, with a strong æneous tinge below the cell; cilia yellowish grey. Abdomen yellowish grey. Legs yellowish grey, tarsi with obscure darker blotches.

Type, ♂♀ Mus. Wlsm.

Hab. West Indies—St. Thomas, 14-24 III. (Gudmann, Hedemann): three specimens. Brazil—Pará (Amazons), 17 IX.-

14 XII. (Schulz): a long series.

Bred by Messrs. Schulz, Gudmann, and Baron von Hedemann. Mr. Gudmann notes it as found "on trunks," while Mr. Schulz writes:—"The Amazonian clothes moth, their larva and pupa-cases called 'traças' in Portuguese. These traças are very frequent in the houses in Pará, keeping on the walls of the rooms and are very injurious to clothes." All three observers send with this species a flattened bladder-shaped case composed of silk and grains of sand, wide in the middle, narrowed towards each extremity and open at both ends. Ecia maculata, Wlsm., a species which although belonging to a different family is almost inseparable from uterella in colour and markings, is found likewise in St. Thomas and at Pará at the same time as uterella. Baron von Hedemann writes of Ecia maculata, "very common on the inner walls of nearly

every house in St. Thomas"; Mr. Schulz, who apparently did not distinguish the two insects, notes uterella as the domestic species; while Mr. Gudmann found it on the trunks of trees; and Baron von Hedemann, who found the cases very common on the inner walls of houses, only succeeded in breeding one specimen. The larva of maculata is unknown.

### 101. MYRMECOZELA, Z.

273. Myrmecozela ochraceella, Tgstr.

Tinea ochraceella, Tgstr. Not. Sällsk. Faun. et Flor. Fenn. För. II. 111 (1847)<sup>1</sup>. Myrmecozela ochraceella, Z. Lin. Ent. VI. 176–7 (1852)<sup>2</sup>; Stgr. & Wk. Cat. Lp. Eur. 271, 425. No. 1435 (1871)<sup>3</sup>; Mschl. Ab. Senck. Nat. Ges. XV. 339, 354 (1890)<sup>4</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 517, 545 (1892)<sup>5</sup>.

Hab. Europe (Finland, Switzerland, Scotland, England) 1-5. Larva in Ants' nests, VIII.-X. West Indies—Portorico 4, 5.

If this species is correctly determined by Möschler its occurrence in the West Indies is a remarkable contribution to the study of Geographical Distribution. It has not yet been detected in the United States, and a myrmecophilous species could hardly be imported from Europe to Portorico. Moreover, the localities in which it is found in Europe are not such as could warrant the suggestion of its having been introduced from the West Indies.

## 102. XYLESTHIA, Clem.

[Clem. Pr. Ac. Nat. Sc. Phil. XI. 259, 262 (1859); Stn. Tin. N. Am. 53-4, 59, 60, fig. 5 (1872).]

# 274. Xylesthia australis, sp. n.

Antennæ simple; dusky cinereous. Palpi with the second joint widely and roughly clothed beneath, apical joint almost concealed; einereous speckled with fuscous. Head and thorax cinereous. Fore wings arched at the base, apex depressed, rounded, termen oblique; cinereous dusted with fuscous, an indication of an obscure cloud-like fuscous spot at the end of the cell is followed by four cloud-like spots above at the base of the costal cilia; cilia cinereous, with a fuscous shade-line running through them. Exp. al. 16-20 mm. Hind wings broader than the fore wings, rounded at the apex; brownish fuscous, cilia the same. Abdomen greyish fuscous. Legs very pale cinereous.

Type, ♀ Mus. Wlsm.; (Paratype ♂ Mus. Gudmann).

Hab. West Indies—HAYTI (Port-au-Prince, 23-25 V., Gudmann);

St. Thomas, 9 III. (Gudmann). Three specimens.

The male specimen from St. Thomas is more distinctly marked, having fuscous spots along the costal margin, a fuscous shade along the disc from the base, and the terminal cilia are mottled. It seems to be, however, only a well-marked variety.

### 103. AMYDRIA, Clem.

[Clem. Pr. Ac. Nat. Sc. Phil. XI. 260, 262 (1859); Stn. Tin. N. Am. 55, 59, 60, fig. 2 (1872).]

275. Amydria anaphorella, Wlsm.

Amydria anaphorella, Wlsm. Pr. Z. Soc. Lond. 1891, 517, 545 (1892) <sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

### 104. PEXICNEMIDIA, Mschl.

[Mschl. Ab. Senck. Nat. Ges. XV. 337-8 (1890).]

276. Pexicnemidia mirella, Mschl.

Pexicnemidia mirella, Mschl. Ab. Senck. Nat. Ges. XV. 338, 354 (1890) ; Wlsm. Pr. Z. Soc. Lond. 1891, 518, 545 (1892) .

Hab. West Indies—Portorico 1, 2.

### 105. TIQUADRA, WKr.

TIQUADRA, Wkr. Cat. Lp. Ins. B.M. XXVIII. 519 (1863); = OSCELLA, Wkr. Cat. Lp. Ins. B.M. XXIX. 783-4 (1864); = MANCHANA, Wkr. Cat. Lp. Ins. B.M. XXXV. 1818 (1866); n. syn. = VENTIA, Wkr. Cat. Lp. Ins. B.M. XXXV. 1838-9 (1866); = ACUREUTA, Z. Hor. Soc. Ent. Ross. XIII. 198-9 (1877).

# 277. TIQUADRA ASPERA, Z.

Acureuta aspera, Z. Hor. Soc. Ent. Ross. XIII. 199–201 (1877)<sup>1</sup>. Tiquadra aspera, Mschl. Ab. Senck. Nat. Ges. XV. 339, 354 (1890)<sup>2</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 518, 545 (1892)<sup>2</sup>.

Hab. West Indies—Portorico<sup>2,3</sup>. Colombia <sup>1,3</sup>.

## 278. TIQUADRA LENTIGINOSA, Z.

Acureuta lentiginosa, Z. Hor. Soc. Ent. Ross. XIII. 201–2 (1877) <sup>1</sup>. Tiquadra lentiginosa, Wlsm. Pr. Z. Soc. Lond. 1891, 518, 545 (1892) <sup>2</sup>.

Hab. West Indies—Trinidad (Port-of-Spain)<sup>2</sup>. Brazil <sup>1</sup> (Rio Janeiro <sup>1</sup>, Petropolis)<sup>2</sup>. Peru (Ropaybamba, 30 XII)<sup>1, 2</sup>.

# 106. Morophaga, HS.

## 279. Morophaga hirsutevestita, sp. n.

Antennee  $\delta$ , slightly serrate, ciliate  $(\frac{1}{3})$ ; umber-brown, finely annulate with ochreous, basal joint brownish ochreous. Palpi (broken, but decidedly rough); umber-brown mixed with pale ochreous (so far as they are visible). Head rough; head and thorax umber-brown mixed with some ochreous scales. Fore wings: costa somewhat arched, apex depressed, termen oblique, somewhat securiform, veins 8 and 9 stalked; dark umber-brown, with scattered spots of ochreous scales, especially noticeable along the costa,

where they form a somewhat regular series, and at the base of the cilia which correspond to the wing-colouring; the dark colouring is concentrated in a patch at the end of the cell, reaching to the costa, and is followed by a paler space and preceded by a paler spot. Evp. al. 25-27 mm. Hind wings and cilia pale brownish cinereous. Abdomen pale brownish cinereous. Legs brownish cinereous, tarsal joints shaded with umber-brown.

Type, & Mus. Wlsm.

Hab. West Indies—Jamaica (Coll. Ragonot). Two specimens received from the late Monsr. Ragonot.

### 280. Morophaga? angulatella, sp. n.

Antennæ stout, slightly serrate; shining whitish ochreous, a black spot beneath at the outer extremity of the elongate basal joint. Palpi whitish ochreous, the apical joint somewhat stout, as long as the second, the second joint with a large triangular tuft beneath (as in some species of the genus Ypsolophus, but the tuft is much less compact and more hirsute) shaded with brown externally almost to the outer edge of the tuft. Head brown. Thorax whitish, edged anteriorly with brown. Fore wings narrow elongate, subovate; creamy whitish, a large brownish-fuscous patch extending from the base along the costal half to one-fourth from the apex, following the fold, its lower edge is angulated upward in the middle, its outer edge passing obliquely to the costa almost parallel with the termen, the costal and terminal margins are mottled with alternate smoky white and brownish fuscous, the cilia suffused with smoky brown. Exp. al. 16 mm. Hind wings brownish grey, a pale line running along the base of the cilia. Abdomen missing. Legs bone-whitish.

Type, of Mus. Wlsm.

Hab. West Indies—Dominica (Point Michell).

This species differs from Amydria and Xylesthia in having veins 8 and 9 of the fore wings stalked, and from Morophaga, with which it agrees in neuration, in the longer apical joint of the palpi and in the second joint being more triangularly clothed.

#### IX. SETOMORPHINÆ.

# 107. SETOMORPHA, Z.

# 281. Setomorpha rupicella, Z.

Setomorpha rupicella, Z. Handl. Kong. Svensk. Vet.-Ak. 1852, 95-6<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 511, 544 (1892)<sup>2</sup>.

Hab. West Indies—Cuba (Havannah)<sup>1, 2</sup>; Hayti (Port-au-Prince, 25 V.—Gudmann). Brazil—Para, X.-XII. (Schulz).

# 282. Setomorpha grenadella, sp. n.

Antennæ greyish fuscous. Palpi porrect, second joint slightly hirsute; pale fawn. Head rough above; pale fawn. Thorax pale fawn. Fore wings pale fawn, shaded round the margins with

small broken patches of umbreous scales, these are somewhat aggregated at the base of the costa, in an elongate patch above the middle of the wing, in a second patch extending from the outer end of the cell to the termen, and near the base of the dorsum; cilia pale fawn mottled with umbreous along their base. Exp. al. 10 mm. Hind wings shining reddish grey; cilia fawngrey. Abdomen fawn-grey shaded with umbreous. Hind tibiæ much tufted above and beneath; greyish ochreous, the spurs paler; hind tarsi mottled with greyish fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 5-10 IV.—H. H. Smith). Two specimens.

#### X. ANAPHORINÆ.

108. Atopocera, g. n.

 $(\ddot{a}\tau o\pi os = strange ; \kappa \epsilon \rho as = a horn.)$ 

Type, & Atopocera occultum, Wlsm.

Antennæ &, stout, simple, tapering outwards.

Labial palpi o, strongly recurved to front of thorax; second joint thickened, somewhat closely clothed, apical joint as long as the second, smooth.

Maxillary palpi small, slender.

Head smooth.

Thorax not tufted.

Fore wings with the costa slightly arched, apex obtuse, termen oblique. Neuration: 12 veins, 7 and 8 stalked enclosing the apex, the rest separate.

Hind wings slightly broader than the fore wings. Neuration: 8

veins all separate.

Abdomen somewhat slender.

Legs, hind tibiæ sparsely hairy above.

This genus constitutes a new section of the *Anaphorina* characterized by having in the fore wing veins 7 and 8 stalked instead of 8 and 9.

# 283. Atopocera occultum, sp. n.

Antennee brownish grey. Palpi brownish grey, the second joint somewhat shaded with fuscous externally. Head and thorax brownish grey. Fore wings fawn-brown, with a few greyish-fuscous scales scattered about the outer third and a scarcely noticeable group of fuscous scales at the upper angle of the cell; cilia fawn-brown, sparsely speckled with greyish fuscous. Exp. al. 12 mm. Hind wings brownish fuscous; cilia paler, divided by a brownish-fuscous shade. Abdomen brownish fuscous; uncus single, lateral claspers scarcely spatulate. Legs cinereous.

Type, of Mus. Gudmann.

Hab. West Indies—HAYTI (Cap Haiti, 18 V.—Gudmann). Unique.

### 109. CÆNOGENES, WISM.

284. Cænogenes? ochracea, Mschl.

Conogenes? ochracea, Mschl. Ab. Senck. Nat. Ges. XV. 337, 354 (1890)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 515, 544 (1892)<sup>2</sup>. Hab. West Indies—Portorico<sup>1,2</sup>.

## 110. HYPOCLOPUS, Wlsm.

285. Hypoclopus parvus, sp. n.

=  $Canogenes\ pusilla$ , Wlsm. (partim) Pr. Z. Soc. Lond. 1891, 514, 544 (1892)<sup>1</sup>.

Antennæ greyish ochreous. Palpi,  $\delta$  recurved to back of thorax; greyish touched with fuscous at the sides, apical joint tipped with ochreous;  $\varphi$  porrect. Head and thorax greyish ochreous intermixed with fuscous. Fore wings pale greyish ochreous, much speckled and blotched with fuscons which is concentrated in three connected patches (one at the end of the cell, one below it, and one at the base), leaving the pale ground-colour more conspicuous in two ovate patches (the first on the middle of the wing, the second beyond it) and in a dorsal patch obtusely angulated upwards before the middle and slightly angulated beyond the middle, a few fuscous specklings along its lower edge; cilia agreeing in colour with the wing. Exp. al.  $\delta$  15.5–17 mm.;  $\varphi$  21 mm. Hind wings and cilia dull greyish. Abdomen greyish. Legs greyish, tarsi with pale subochreous speckling.

Type, ♂ Mus. Wlsm.; ♀ Mus. Gudmann.

Hab. West Indies—St. Thomas, 18 III.-8 IV. (Gudmann, Hedemann); Dominica (Point Michell, 29 V.). Eleven specimens.

This species varies considerably: in the intermediate form which I have described as the type the dark and pale markings are sharply defined; in the extreme forms either the dark or the paler colour

predominates and tends to efface the pattern.

The specimen which I recorded (Pr. Z. Soc. Lond. 1891, 514) from Dominica as Canogenes pusilla, Z., was not in good condition, and the reception of better specimens from the same island proves it to be Hypoclopus parvus. My notes on the structure of "Anaphora pusilla, Z." refer truly to that species, but the additional locality is erroneous, and Canogenes pusilla, Z., must be removed from the West Indian list.

# 111. EULEPISTE, Wlsm.

286. Eulepiste umbratipalpis, Wlsm.

Eulepiste umbratipalpis, Wlsm. Pr. Z. Soc. Lond. 1891, 511, 544, Pl. XLI. 10 (1892) 1.

Hab. West Indies-SAN DOMINGO 1,

### 112. FELDERIA, Wlsm.

287. Felderia dimidiella, Wlsm.

Felderia dimidiella, Wlsm. Pr. Z. Soc. Lond. 1891, 516, 545, Pl. XLI. 15 (1892) <sup>1</sup>.

Hab. West Indies—Cuba 1.

### 113. Pilanaphora, g. n.

 $(\pi \hat{\imath} \lambda os = \text{felt}; Anaphora, nom. gen.)$ 

Type, ♂♀ Pilanaphora hedemanni, Wlsm.

Antennæ: 3 somewhat flattened, serrate towards the apex.

Labial palpi: 3 very strongly recurved, reaching to the back of the thorax, brush-like throughout; 2 porrect, fully twice the length of the head beyond it.

Fore wings: 3 scarcely more than twice as long as broad, with a long fringe along the basal third of the costa (bent back and lying flat on the wing); 2 without the costal fringe. Neuration: 12 veins all separate, 8 to apex.

Hind wings:  $\sigma$  with a strong upstanding fringe extending from the base along the lower edge of the cell to vein 2, the abdominal margin densely hairy;  $\varphi$  without the upstanding fringe. Neuration: 8 veins all separate.

Abdomen densely hairy.

Legs: all the tibiæ densely clothed in the male, less strongly in the female.

Allied to Acrolophus, Poey, and Anaphora, Clem.; but readily separated by the erect fringe on the hind wings.

# 288. PILANAPHORA HEDEMANNI, sp. n.

Antenna brownish ochreous. Palpi, head, and thorax: 3 reddish fawn-grey; 2 mouse-colour. Fore wings: 3 tawny reddish, speckled along the costa with purplish fuscous, the margins of the cell also marked out with purplish fuscous, which is intensified at the end of the cell and in a triangular blotch on its lower edge before the angle; a whitish-ochreous streak follows the line of the fold, scarcely interrupted by a dark spot near its base, but incised at its upper edge by the triangular spot before mentioned; at the end of the cell a small reduplicated dot of white raised scales (probably very fugitive), which is connected by a pale whitish streak with a pair of purplish-fuscous spots nearer to the termen; cilia conforming to the wing-colour, somewhat speckled: 2 mouse-colour, with the markings less distinct, and the whole wing-surface more evenly and distinctly speckled with darker spots; cilia slightly darker than the wings. Exp. al. 320-22 mm.: 24-26 mm. Hind wings, 3 greyish fuscous, the raised tuft fawn-ochreous, and the hairs along the abdominal margin also inclining to ochreous; cilia shining, paler than the wings; 2 shining, fuscous with a purplish gloss; cilia slightly paler than the wings. Abdomen: of thickly clothed with hoary

grey, anal tuft inclining to othreous; Q cinereous, with paler hairs towards the base. Legs subothreous, dusted with greyish fuscous.

Type, ♂ Mus. Wlsm.; ♀ Mus. Hedemann.

Hab. West Indies—St. Croix, 21 IV.-13 VI. (Gudmann,

Hedemann, Pontoppidan). Ten specimens.

In the absence of evidence to the contrary, I must regard the ten specimens before me as belonging to one variable species; the general pattern of the markings is retained wherever these are traceable, but in some they are entirely obliterated; the ground-colour varies from tawny reddish to pale cinereous, with more or less suffusion. The females also exhibit pale and dark varieties.

### 114. Anaphora, Clem.

289. Anaphora Popeanella, Clem.

= AGROTIPENNELLA, Grt. 14; = SCARDINA, Z. 14

Anaphora popeanella, Clem. Pr. Ac. Nat. Sc. Phil. XI. 261 (1859)¹; Stn. Tin. N. Am. pp. vi, 57–8, 60. fig. 4 (1872)². Anaphora agrotipennella, Grt. Can. Ent. IV. 137–8 d, 142–3 \( \) (1872)³. Anaphora popeanella, Grt. Can. Ent. IV. 137–8, 142–3 (1872)³. Anaphora scardina, Z. Verh. z.-b. Ges. Wien, XXIII. 215–6 (1873)⁵. Anaphora agrotipennella, Mrt. Can. Ent. VIII. 185–6 (1876)⁶; Chamb. Bull. U.S. G.G. Surv. IV. 110˚, 129 (1878)⁶. Anaphora popeanella, Chamb. Bull. U.S. G.G. Surv. IV. 129 (1878)⁶. Anaphora scardina, Chamb. Bull. U.S. G.G. Surv. IV. 129 (1878)⁶. Anaphora agrotipennella, Wlsm. Tr. Am. Ent. Soc. X. 167–8 (1882)⁶. Acrolophus agrotipennella, Grt. Can. Ent. XVIII. 199 (1886)⁶. Anaphora popeanella, Wlsm. Tr. Ent. Soc. Lond. 1887, 138⁶. Anaphora popeanella, Wlsm. Tr. Ent. Soc. Lond. 1887, 138⁶. 161–3, Pl. VIII. 11, 11 a–c ⅙. Mschl. Ab. Senck. Nat. Ges. XV. 337, 354 (1890)⁶; Riley, Smith's List Lep. Bor. Am. 95. No. 5061 (1891)⅙; Wlsm. Pr. Z. Soc. Lond. 1891, 515, 545 (1892)⅙.

Hab. UNITED STATES 1-14, 16-17, VI.-VII. Larva roots of Trifolium pratense, IV.-V. 6, 7, 13. West Indies—Portorico 15, 17.

# 290. Anaphora triatomella, sp. n.

Antenna: 3 serrate towards the apex; whitish ochreous. Palpi: 3 recurved to beyond the back of the thorax, apical joint roughly clothed; whitish ochreous in front, reddish brown on the apical joint; 2 porrect, twice the length of the head beyond it; pale cinereous. Head and thorax: 3 mouse-grey, mixed with reddish brown; 2 pale cinereous. Fore wings: 3 whitish ochreous along the costa and dorsum, transversely streaked and mottled with mouse-grey; suffused with reddish brown along and beyond the cell, much shaded and blotched with mouse-grey, which reaches the dorsum near the base and sends an angular projection downward across the fold opposite to the middle of the dorsum; at the end of the cell are three tooth-like dots of white scales in an even parallel transverse series; cilia mouse-grey, mottled with

reddish-brown: Q pale cinereous throughout, more or less speckled with greyish fuscous, the markings confined to three greyish-fuscous spots, one about the middle of the cell, another at the end of the cell, and the triangular one (as in the male) coming halfway between them on the lower edge of the cell, its apex crossing the fold. Exp. al. d 20 mm.; d 23 mm. Hind wings greyish fuscous; cilia scarcely paler. Abdomen greyish. Legs whitish ochreous.

Type,  $\mathcal{S} \supseteq Mus$ . Hedemann.

Hab. West Indies—St. Thomas, 20 III.-10 IV. (Gudmann,

Hedemann). Five specimens.

This species is very variable in colour in both sexes, and the markings in some varieties are obliterated; but the white spots appear to be constant in the male.

### 291. Anaphora arcasalis, Wkr.

Palthis? areasalis, Wkr. Cat. Lp. Ins. B.M. XVI. 153-4 (1858) <sup>1</sup>. Anaphora areasalis, Wlsm. Pr. Z. Soc. Lond. 1891, 515, 545 (1892) <sup>2</sup>. Hab. West Indies—San Domingo <sup>1, 2</sup>.

### 292. Anaphora mimasalis, Wkr.

Palthis? mimasalis, Wkr. Cat. Lp. Ins. B.M. XVI. 154 (1858)<sup>1</sup>. Anaphora mimasalis, Wlsm. Pr. Z. Soc. Lond. 1891, 515, 545 (1892)<sup>2</sup>.

Hab. West Indies—SAN DOMINGO 1,2.

## 293. Anaphora noctuina, Wlsm.

Anaphora noctuina, Wlsm. Pr. Z. Soc. Lond. 1891, 515-6, 545, Pl. XLI. 14 (1892) 1.

Hab. West Indies—Cuba 1.

## 115. Acrolophus, Poey.

## 294. ACROLOPHUS VITELLUS, Poey.

Acrolophus vitellus, Poey, Cent. Lp. Cuba, Pl. (XX.) (1833)<sup>1</sup>; Wlsm. Tr. Ent. Soc. Lond. 1887, 148<sup>2</sup>: Pr. Z. Soc. Lond. 1891, 512, 544, Pl. XLI. 11 (1892)<sup>3</sup>.

Hab. West Indies—Cuba 1-3; (? Portorico 3).

# 295. Acrolophus? reflexus, F.

Bombyx reflexa, F. Ent. Syst. III. (1) 448. No. 128 (1793) <sup>1</sup>. Phalæna (Bombyx) reflexa, Turton, Syst. Nat. III. 212 (1806) <sup>2</sup>.

"reflexa. 128. B. alis deflexis cinereo fuscoque variis, palpis

reflexis longitudine thoracis.

- "Minuta. Antennæ simplices, cinereæ. Palpi compressi, hirsuti, inter antennas reflexi, ferruginei usque ad alas pertingunt. Alæ anticæ cinereæ lunula magna, media liturisque fuscis. Posticæ cinereæ.
  - "Habitat in America meridionalis, Dr. Pflug."1
  - = West Indies 1,2 (probably St. Thomas or St. Croix).

#### 296. ACROLOPHUS POEYI, Wlsm.

Acrolophus poeyi, Wlsm. Pr. Z. Soc. Lond. 1891, 512-3, 544, Pl. XLI. 12 (1892)<sup>1</sup>.

Hab. West Indies—St. VINCENT 1.

### 297. ACROLOPHUS NIVEIPUNCTATUS, WISM.

Aerolophus niveipunctata, Wlsm. Pr. Z. Soc. Lond. 1891, 513, 544 (1892).

Hab. West Indies—Cuba 1.

298. ACROLOPHUS PLUMIFRONTELLUS, Clem.

## = BOMBYCINA, Z.

Anaphora plumifrontella, Clem. Pr. Ac. Nat. Sc. Phil. XI. 261 (1859)<sup>1</sup>; Stn. Tin. N. Am. pp. vii, 39, 57, 59, 60 (1872)<sup>2</sup>. Anaphora bombycina, Z. Verh. z.-b. Ges. Wien, XXIII. 216-7 (1873)<sup>3</sup>; Chamb. Bull. U.S. G.G. Surv. IV. 129 (1878)<sup>3</sup>. Anaphora plumifrontella, Chamb. Bull. U.S. G.G. Surv. IV. 129 (1878)<sup>5</sup>. Acrolophus plumifrontellus, Wlsm. Tr. Ent. Soc. Lond. 1887, 149-50, Pl. VII. 5<sup>6</sup>; Mschl. Ab. Senck. Nat. Ges. XV. 336, 354 (1890)<sup>7</sup>; Riley, Smith's List Lep. Bor. Am. 94. No. 5048 (1891)<sup>8</sup>: Wlsm. Pr. Z. Soc. Lond. 1891, 513-4, 544 (1892)<sup>9</sup>.

Hab. United States 1-9. West Indies—Cuba 9; Portorico 7,9.

### 299. ACROLOPHUS WALSINGHAMI, Mschl.

Acrolophus walsinghami, Mschl. Ab. Senck. Nat. Ges. XV. 335, 336, 354 (1890)<sup>1</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 514, 544, Pl. XLI. 13 (1892)<sup>2</sup>.

Hab. West Indies—Portorico 1,2.

## 300. Acrolophus leucodocis, Z.

Anaphora leucodocis, Z. Hor. Soc. Ent. Ross. XIII. 197–8 (1877)<sup>1</sup>; Wlsm. Tr. Ent. Soc. Lond. 1887, 159–60<sup>2</sup>. Acrolophus leucodocis, Wlsm. Pr. Z. Soc. Lond. 1891, 514, 544 (1892)<sup>3</sup>.

Hab. West Indies—Cuba 1-3. (? Brazul 1-3).

# 116. PSEUDANAPHORA, Wlsm.

## 301. PSEUDANAPHORA NOCTIVAGA, Sp. n.

Antennæ purplish fuscons above, ochreous beneath. Palpi pale ochreous, a dark fuscons patch externally at the base of the first joint. Head ochreous, with a purplish shade; face pale ochreous. Thorax purplish fuscous. Fore wings purplish fuscous, mottled with pale ochreous, the costa reticulated with dark tawny fuscous throughout; an oblique small tawny-fuscous patch extending on either side of the fold near the base; a larger patch of the same colour lying on the onter half of the fold, not reaching the dorsum but extending upwards at its inner extremity across the cell; this is followed by some pale ochreous mottling, which also

precedes and follows a third conspicuous quadrangular tawny fuscous patch at the end of the cell; cilia pale ochreous, heavily sprinkled with purplish fuscous. Exp. al. 16 mm. Hind wings greyish brown. Abdomen greyish brown; anal tuft slightly paler. Legs greyish cinereous, hind tarsal joints banded with purplish fuscous.

Type, & Mus. Wlsm.

Hab. West Indies—Grenada (Balthazar, 250 ft., windward side, 10 V.—H. H. Smith). Unique.

### 117. BAZIRA, Wkr.

 $= \delta E_{DDARA}$ , Wkr.

### 302. BAZIRA XYLINELLA, Wkr.

Eddara xylinella, Wkr. Cat. Lp. Ins. B.M. XXVIII. 518 (1863) <sup>1</sup>. Bazira xylinella, Wkr. Cat. Lp. Ins. B.M. XXX. 1009 (1863) <sup>2</sup>; Wlsm. Pr. Z. Soc. Lond. 1891, 516, 545 (1892) <sup>3</sup>.

Hab. West Indies—Jamaica 1-3.

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Invalid names are printed in italics; = denotes that the name in italics is a synonym; \$= a homonym: †= wrongly written either in inception or in adoption; ‡ signifies the correction of a name hitherto wrongly written; \*= invalid as not containing the type of the conception. Names within square brackets are referred to in this paper, but are not connected with the West-Indian fauna.

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5. Observations on the Ophthalmoscopic Appearances of the Eyes of the Order Primates. By G. Lindsay Johnson, M.A., M.D., F.R.C.S., F.Z.S.

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### (Plates II.-VI.)

Adopting the classification given in Sir W. Flower's classical work on the Mammals, I include in the order Primates: Man, Monkeys, Marmosets, and the suborder Lemuroidea. I have found that a comparison of the ophthalmoscopic appearances of the fundus oculi of the various members of this most important order enables us to arrive at certain definite conclusions, which I believe to be of interest to zoologists.

All the animals, including Man, were examined by me in a darkened room with the same amount and the same kind of illumination, and also with the same degree of magnification.

Only animals in perfect health were selected, and, so far as possible, several animals of the same species were examined in order to preclude the possibility of abnormal fundi. Moreover, in all cases both eyes were examined and ascertained to be similar in all respects before a drawing was made. As a further precaution, each detail of the drawing as it was being painted by my artist, Mr. Head, was confirmed by myself in the living eye, and altered (if necessary) until it represented the original in all respects.

As regards keeping the animals quiet, I found considerable difficulty at first, but as my experience increased the difficulties vanished. In no case was any drug or anæsthetic used, but in the case of a few of the wilder Monkeys a net was thrown over them. In all the other cases the animal was held gently by the keeper in his lap. The animal rarely struggled, and usually became